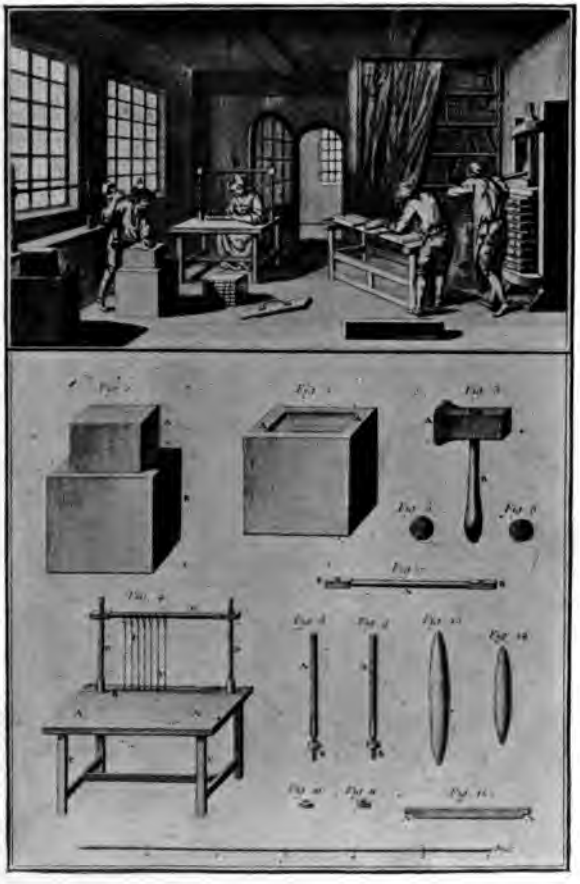
# BOOKBINDING FOR LIBRARIES

DANA

The picture opposite the title-page is a reprint of a page from the volume of plates, made in 1771, to illustrate Diderot's Encyclopædia. This page is one of six, each 8x12 ins. in the original, illustrating the article in the encyclopædia on binding.

The picture in the upper part of the plate represents a binder's workshop. The person at A is beating a book. The woman at B is sewing. The man at C is cutting or trimming the edges of a book. The man at D is working a press.

Of the figures below: 1 is a piece of marble on which books are beaten; 2 is a piece of marble of different shape for the same purpose; 3 is a beating hammer; 4 is a sewing table or bench, on which books are sewn; 5 and 6 are balls of thread for sewing books; figures 7, 8, 9, 10, 11, and 12 are parts of a sewing bench; 13 and 14 are large and small paper folders.



# Notes on

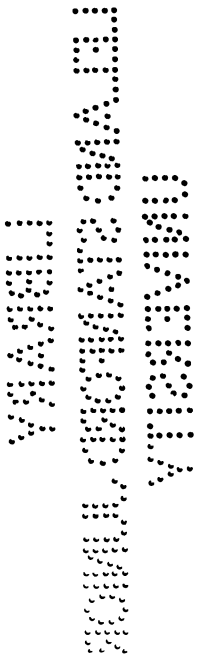
# Bookbinding for Libraries

By

John Cotton Dana

Librarian Free Public Library,
Newark, N. J.

Library Bureau, Chicago
1906



## Naudé on Binding

"The fourth is, to retrench & cut off all the superfluous expences, which many prodigally and to no purpose bestow upon the binding and ornaments of their Books, and to employ it in purchasing such as they want, that so they may not be obnoxious to that censure of *Seneca*, who handsomly reproaches those, *Quibus voluminum suorum frontes maxime placent titulique;* & this the rather, that the binding is nothing but an accident & form of appearing, without which (at least so splendid and sumptuous) Books become altogether as useful, commode & rare; it becoming the ignorant onely to esteem a Book for its cover; seeing it is not with Books, as it is with men, who are onely known and respected for their robes and their clothes, so that it is a great deal better, and more necessary, for example, to have a good quantity of Books, well & ordinarily bound, than to have a little Chamber or Cabinet full of washed, gilded, ruled, and enriched with all manner of nicity, lux and superfluity."

From John Evelyn's translation of Gabriel Naudé's "Instructions Concerning Erecting of a Library." London. 1661. Chapter 5.

## Contents

## CHAPTER I

## Introduction

As the title indicates these notes have been compiled in the hope that they may be of assistance to librarians in caring for the binding and rebinding of library books. They hardly touch upon publishers' binding or the decoration of bindings. The suggestion and advice they give should not be taken as final, for the binding and rebinding question is not yet settled. They may help some to carry out more successfully their own inquiries and experiments. If good binders were more common librarians would need little of the information here briefly set forth. But under the present conditions of the bookbinder's art in this country librarians themselves must often furnish considerable expert knowledge, if they wish their work well done.

I have refrained from going much into the details of the process of binding. The details can only be made clear by means of illustrations, and have already been most admirably set forth in Douglas Cockerell's book. I have tried to draw attention to the important points. The librarian ought to know good results when he sees them, or at least when he tests them on his books; the details of every step he

can learn if he will, by a little practice and a good deal of observation. No librarian should try to bind or to conduct personally his own bindery. Binding is a special trade, and skill and speed in it come only by long practice. The librarian cannot become a skilled binder. He should become familiar with the results of the binding he gets by a study of his books. If he finds they do not wear well, but rot, break or show loose pages, let him keep a few statistics, and if he learns he is wasting money on cheap work or poor material, let him change his material and his processes, and perhaps his binder. I hope this book may lead some to test the work they are now getting, and may help some to get more satisfactory workmanship and more enduring materials. It is not a guide to the craft of binding. To get good binding, go to a good binder; to learn about the binding craft, practice it and read Cockerell; to discover if your binding is good, watch it and gather statistics of its wear.

Much of the information, many reports of experiences and many suggestions will be found in the lists of leathers, etc., and definitions of terms used in binding. It seemed unwise to repeat them as part of a connected text.

In considering the subject of economical binding and rebinding for libraries, we find that we are entirely without standards. We have no figures for comparisons. Librarians have, save in a very few cases, made no study of the comparative value of bindings, either of original cloth or of the rebindings

they have had put on their books. If a few librarians would note the number of times books can be issued without rebinding after they are received in the original publisher's cloth, and how many issues they will stand after they have been once, or twice, rebound, they would, in a few months, have data from which they could draw helpful conclusions in regard to the comparative value of bindings and rebindings.

The test of a binding, whether publishers' original, special from the sheets, or a rebinding, lies, for ordinary lending books, in the ratio of its cost to the number of times the book it covers is lent for home use before being discarded. This ratio has rarely been systematically noted.

To the inquiry, does the method of rebinding which my library now employs give the best possible return for the money spent? most librarians must reply that they do not know.

Reference and college libraries are often also much in the dark. The continued quite general use for permanent bindings of a leather which tests have shown will not last over 25 or 30 years at the most is an evidence of this.

In England, as is well known, a good many years of careful observation and comparison of experiments have led a large number of librarians to the conclusion which some American librarians also accept, that first-class bindings, even at what seems like a high figure, put on before a book has received any wear at all, directly from the publishers' sheets, is the part of sound economy.

I sent a letter of inquiry to a large number of libraries asking for detailed information about the wear of books in publishers' bindings and in the one or more rebindings which were placed on them. Replies were received from 18 libraries, giving brief life histories of 74 books. Definite conclusions cannot be drawn from these reports, as librarians differ much in their ways of treating books. Some rebind them as soon as they show serious signs of wear; others keep them in circulation long after they have begun to go to pieces. But the figures indicate that it would pay these libraries, as it probably would all others, to get most of the books which are to be subjected to much handling strongly bound direct from publishers' sheets.

The reports show that 74 books cost, including first price, rebinding and labor of handling for rebinding, an average of $1.38 each; that they were lent an average of 79 times in the two states, new and rebound; and that they were out of use an average of five weeks while being rebound. A book of a nature similar to those reported on, well-bound from publishers' sheets costs about $1.50; can be lent from 100 to 150 times and loses no time in being rebound.

Of these books 52 were rebound a second time at an average cost, including labor in preparation, of 40 cents; were out of use an average of five weeks; and were lent an average of 43 times each in this second binding. The complete history of the books a second time rebound is as follows:

| | |
|---|---|
| First cost | .95 |
| Cost of first rebinding | .36 |
| Cost of time in handling | .07 |
| Cost of second rebinding | .33 |
| Cost of time in handling | .07 |
| Total cost | 1.78 |
| Times lent in publishers' cloth | 32 |
| Times lent in first rebinding | 47 |
| Times lent in second rebinding | 43 |
| | 122 |
| Time out of use first rebinding | 5.5 weeks |
| Time out of use second rebinding | 5. weeks |
| Total time out of use | 10.5 weeks |

These figures do not tell the whole story. The book bound strongly and flexibly from publishers' sheets is from the first more convenient to handle and pleasanter to read, and usually looks better throughout all its one long life than do, on the average, those books which twice or thrice in their histories get into a broken-backed, loose-leaved, generally disreputable condition. Furthermore, and this is most important, a book is most wanted in a library when it is new; if sent out to be rebound for five and a half weeks after it has been lent 32 times it is out of use just when it is most in demand; and the library loses in its effectiveness—that is, in the service it can render its public for the money expended—much more than the mere difference in the money cost of the two kinds of binding would indicate. The durable first binding gives us a book which can be in constant service from 100 to 150 times from

the day it goes to the shelves, just when it is most needed. A book once or twice rebound in the first few months of its life is a special source of annoyance—the paradox is permissible—by its very absence.

Table of life histories:

| Library | No. of books reported on | First cost of books | Times lent before rebinding | Cost of rebinding | Weeks out of use | Cost of handling | Times lent in rebinding | Cost of 2d rebinding | Weeks out of use | Cost of handling | Times lent in 2d rebinding |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9 | 9 00 | 30 | 4 50 | 6 | | 40 | | | | |
| 2 | 2 | 2 00 | 40 | 70 | 8 | 20 | 70 | | | | |
| 3 | 5 | 3 25 | 19 | 2 50 | 6 | 50 | 23 | | | | |
| 4 | 10 | 9 80 | 15 | 4 50 | 4 | 60 | 25 | 4 50 | 8 | 60 | 32 |
| 5 | 1 | 1 00 | 28 | 35 | 4 | 12 | 50 | | | | |
| 6 | 10 | 10 00 | 28 | 2 50 | 6 | 30 | 31 | 2 50 | 6 | 30 | 22 |
| 7 | 4 | 4 00 | 20 | 1 80 | 4 | 40 | 25 | 1 80 | 4 | 40 | 15 |
| 8 | 1 | 1 00 | 70 | 54 | 10 | 08 | 100 | | | | |
| 9 | 1 | 1 00 | 75 | 35 | 10 | 08 | 45 | 54 | 10 | 08 | 100 |
| 10 | 3 | 3 00 | 29 | 1 05 | 2 | 30 | 80 | 1 05 | 2 | 30 | 115 |
| 11 | 1 | 99 | 37 | 40 | 6 | 12 | 36 | | | | |
| 12 | 3 | 2 70 | 35 | 1 20 | 6 | 36 | 40 | | | | |
| 13 | 1 | 96 | 18 | 35 | 6 | 10 | 64 | 35 | 6 | 10 | 32 |
| 14 | 2 | 1 80 | 22 | 50 | 5 | 16 | 14 | 70 | 5 | 16 | 14 |
| 15 | 4 | 2 72 | 19 | 1 40 | 4 | 32 | 19 | 1 40 | 5 | 32 | 14 |
| 16 | 15 | 15 00 | 45 | 3 75 | 4 | 1 50 | 60 | 3 75 | 4 | 1 50 | 50 |
| 17 | 1 | 1 00 | 15 | 25 | 4 | 06 | 60 | 15 | 4 | 06 | 50 |
| 18 | 1 | 98 | 30 | 35 | 4 | 08 | 62 | 35 | 4 | 08 | 28 |
| Totals | 74 | 70 20 | 575 | 26 99 | 99 | 5 22 | 844 | 17 09 | 58 | 3 84 | 472 |
| Averages for each Book | | 95 | 32 | 36 | 5½ | 07 | 47 | 33 | 5 | 07 | 43 |

In the Newark library an examination of 56 books, chiefly novels, from 15 or 20 different publishers, shows that on the average they were lent in publishers' binding only 25 times each before being rebound;

and that 42 books in the juvenile department were lent in the publishers' binding an average of only 17 times each.

In bindings and rebindings one of the most essential things to be secured is ease of opening. A book that opens out easily, and lies flat without being pressed or held in position, will probably keep clean and whole for more than twice as many lendings as one that is held together tightly at the back. As a great many of the library books which call for rebindings have to be trimmed at the back and overcast, it is essential that the overcast sewing be of a flexible nature, one that permits of the easy opening of the book. Probably few of the factors in book construction and book injury have been more effective than the tight binding, held open with difficulty, which is produced by nearly all of the current overcasting or whipstitching.

Another point that cannot be too strongly insisted on is that books not only differ from one another in their natures and so require different treatment in binding; but also differ in the use they are to receive, and require different bindings on that account.

It should be understood that bookbinding is a craft in the best sense of that word. To bind a book well calls for good judgment and care at every step. The librarian can draw up schedules with infinity of detail, and make them as correct as he may please, basing them on experience without end; and the binder, so far as material and processes are concerned, may seem to follow these specifications exactly, and

still may produce poor bindings. To secure a good binding the spirit of the binder must go into it. In drawing the thread, in paring and placing the leather, in applying the paste and glue, and in every other of the many processes involved, the man without good will, as the man without skill, can spoil the whole binding. Librarians should learn to esteem bookbinding highly. It is a craft which lies close to them. It is preëminently their business to encourage it to grow in excellence. They should develop their local binder's interest in his calling, stand by him, urge him on to better work, and pay him adequately for it.

One may frankly say that the character of binding done in nearly all libraries in America has been, up to the present time, a discredit to the library profession. We owe it to ourselves to take up this craft and do what we can to elevate it.

One objection sometimes made to bindings of the highest grade is that they last too long; and after the book is too greatly soiled and tattered within to be longer kept, the binding itself still holds, showing that more care has been put into its construction, and consequently more cost, than it needed. The objection needs only to be stated for its absurdity to be seen. The thorough binder, the skilled craftsman, adapts his binding to the book and to the use, as far as he can judge of it, which it is to receive.

He binds each book so well that it will hold together to the end of time; or until its paper fairly drops to pieces. He can issue with each volume no

guarantee that it will not receive more than its proper baptism of dirt from careless borrowers long before the paper in it begins to give way and fray out. The binder's obligation is to bind the book well. It is the librarian's business to see that the book is, as to its interior, well treated. As to its binding lasting too long, why should the librarian concern himself about the shell after the kernel is eaten? It should be noted again, however, that a book well bound, opening easily, and lying open without pressure from fingers or thumbs, keeps clean many times longer than one that opens hard.

The sum of all my observations is, the best is the cheapest. If a book is worth binding let it be bound by the best man available. If possible, buy books so well bound from the publishers' sheets, that they will never need to be bound again.

Newark, N. J., J. C. D.
Free public library,
January, 1906.

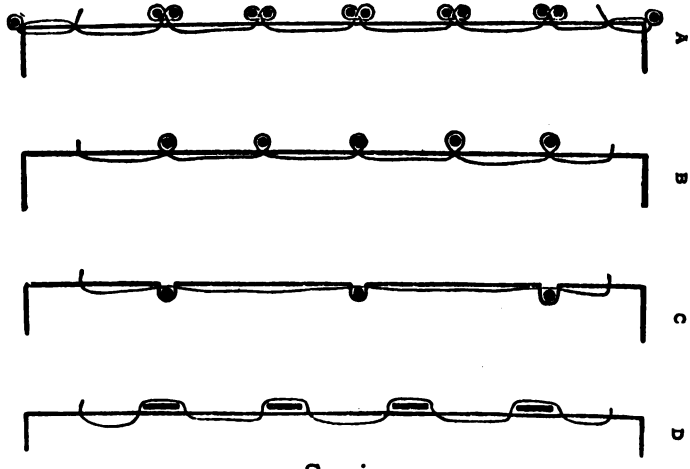
## CHAPTER II

## Binding: The Process

Books are now printed in large sheets from 4 to 64 pages at a time. In many cases paper is drawn from a roll (as it is in the printing of a newspaper), printed on both sides in large sections of 64 pages, and cut and folded as it leaves the press. These sheets, of several pages each, after being printed, are gathered into a complete book, sometimes by a machine, and are then sewn together by a machine. This machine for sewing is a comparatively recent invention. In most cases sewing done on a machine is not as strong as the old-fashioned hand sewing. The sections, or signatures, or folds of the book, as the several sets of several pages each are called, are caught together only by thread; strings or tapes are not used. This sewing is then reinforced by a piece of cloth, usually thin, cheap muslin, or poor super, which is pasted over the back and allowed to extend a little way down each side. But sewing on a machine can be done with strings added and made very strong.

Covers for books are now made by machines into which are fed pieces of cardboard and a roll of cloth. The machine cuts the cloth into the proper

size, pastes it and folds it over the boards into a cover, leaving a loose place between the two boards to be filled by the body of the book. This cover is then printed in a machine much like a printing press; the gold of the title on the back or sides or both, and the colors or blank impressions, for ornament, all being impressed on it with great rapidity. The completed cover, called a case, is then pasted




**Sewing**

A Section of Fifteenth Century sewing on double bands with head and tail bands.
B Section of modern "flexible" sewing round single bands.
C Section of ordinary sewing with sunk bands.
D Section of tape sewing advocated for cheap work in place of C.

From report of the Committee on Leather for Bookbinding. Edited for Society of Arts. London: Bell & Sons, 1905.

to the sides of the book. A book thus bound has nothing to hold cover and inside together save a strip of thin muslin, with a strip of paper which goes over it, passing from the back of the book to the inside of the board covers. This strip grows weak after a little use and frequently breaks, or pulls away from the cover, or from the back, or from both. Books printed on cheap paper and folded and sewed and bound by machinery in the manner thus very briefly outlined can be produced and sold at present for 10 cents each, or even less.

Books printed with more care, on better paper, with a better quality of cloth on the cover, and a more elaborate title in real gold instead of some cheaper imitation of it, books, that is, like the novels issued by the better class of publishers, can be produced in quantities of from one to three thousand, for from 15 to 30 cents each. Few of the novels put on the market today cost the publishers, for their making alone, as much as the latter price. To this must be added a royalty to the author, generally 10% of the retail price, the cost of the management of the business and the advertising. In the case of small editions, one or two thousand, this brings the original cost of the average work up to 50 or 75 cents. Suppose this book to be offered at retail at $1.25. There must then be deducted from this retail price the discount to the jobber, 25 to 40+10%, and the royalty, and the advertising, and the cost of production, etc., leaving a profit to the publisher of from 5 to 20 cents on each volume. A well-made

and widely advertised novel which does not sell more than a thousand copies is not a very profitable product for a publisher to put out.

The school text-books issued by the more reputable publishing houses are generally very well made. They are printed on good paper, usually rather highly calendered, with good ink, are bound with extra care, and have good material in their covers. The competition between school book publishers makes it necessary for them in self-defence to produce books which will wear well in the hands of the average pupil.

Up to a few years ago all books were sewn by hand, the covers were made by hand, and hand work was employed in putting book and cover together.

The process of sewing by hand may be briefly described as follows: Two or more strings or tapes are stretched between the edge of a board and a stick held horizontally above it by two uprights. The book folded and ready for sewing, after having been either pressed or beaten with a hammer to make it lie smooth, is held in a vise and two saw cuts are made in the back at about the same distance from each other and from the ends. Two smaller saw cuts are also made in the back of the book, one between each of the larger ones and the opposite ends of the back. The first signature—the fold or section made of a large sheet folded—of the book is laid on the board so that the larger saw cuts are opposite the two strings. A thread is passed through the small cut at one end, into the

middle of the fold, then out again by the first string, around the string, and in again to the middle of the fold, then along the inside of the fold to the next string, around that string, along inside the fold, then out again at the other small cut. The second signature is then laid on top of the first. The thread is passed into the small cut, along and around the two strings, as with the first signature, and out at the other end, where it is tied to the end of the thread which has been left sticking out of the first saw cut for this purpose. This process is continued until the book is all fastened together and to the strings. As the sewing goes on, the several signatures are caught together at the smaller holes at each end by passing the thread, as it comes out of the hole, down and under the loop made by the passing of the thread between the two signatures previously sewn. In the case of a book containing a large number of signatures the thread does not extend the whole length of each fold, but passes from one to another as it goes the length of the book, gathering on two signatures at once. Sometimes, by using four strings instead of two, the string is made to pass through and to sew on three signatures at a time. Examples of this two-on and three-on method can be seen in almost any large book bound prior to 15 or 20 years ago. In very careful binding by hand in the early days of book-making, the strings were not set into saw cuts; but were simply laid across the back of the book. The thread came out of the signature and passed around the strings, and went in

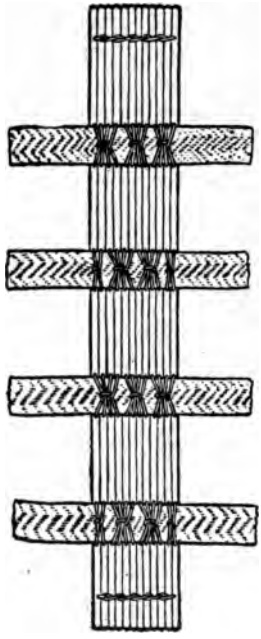
again. The strings, with the threads thus wrapped around them, made a welt across the back of the book. These welts, when covered by the leather of the binding showed as raised bands. These raised bands are imitated by pasting bits of leather on the back in much so-called fine binding today. In some cases the old process is employed and the bands have a real reason for existence. Books are sometimes sewn on tapes or strips of vellum. These, laid across the back, sometimes make ridges which are treated as bands in the completed book.

In old bindings, to give the book a better appearance at top and bottom, what is called a headband was put on with thread, the thread passing through the signatures and from one signature to another in such a way as still more securely to hold these together. Today the headband is still used; but usually it is simply pasted in and is little more than an ornament. Sometimes the book's back is still further reinforced by pasting or gluing to it a piece of vellum, leather or heavy cloth before the process of putting on the cover begins.

Set rules for sewing books should not be laid down. Each book is treated by the skillful binder, or should be, in accordance with the character of its paper, the number of inserts, the thickness of the paper, the size of the signatures, the size of the leaves, the use it is to receive, and other facts. The good binder binds each book well according to its kind.

After the book is properly sewn, the strings on which it is gathered are cut off a short distance

from the sides. Pieces of cardboard are cut of the proper size for a cover. The ends of the strings are laced into them or fastened down upon them with paste or glue. The leather for the cover is then



**Showing a method of sewing on tapes**

The catching up of the alternate groups of threads as they cross the bands renders the sewing firmer. There are other methods of achieving this end.

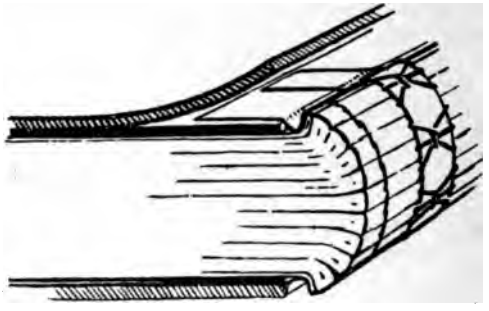
From report of the Committee on Leather for Bookbinding. Edited for Society of Arts. London: Bell & Sons, 1905.

pasted or glued to the back and the outside of the boards. The ends are turned over the boards and at the top and bottom of the book are turned down and pasted to themselves, thus forming a roll or crown which lies up close to the headband. The sides are then covered, if the book is not to be bound in full leather, with cloth or paper or other material. The outside sheets of the books, called end-sheets, are then pasted to the inside of the cover and the book is practically complete.

The back of the book is always covered with glue after the sewing and before the leather or cloth is put on. This glue is thin and hot, and is put on to hold together the backs of the signatures. In rounding, the binder manipulates the book with the hands, and taps it with a hammer until the proper shape is secured. In edition work this is done on a machine. In backing the book is held between two metal, or metal-edged, plates close up to the back, the back having been stiffened previously with a coat of glue which has not set very firmly; and with a hammer the backs of the signatures are pounded down and out, making a slight ledge or groove along the outer edges against which set later the boards of the covers.

If the book is to be tight back the cloth or leather is glued direct to the backs of the signatures thus rounded, though often a thin piece of cloth, super, is first glued on, extending over onto the sides. If it is to be loose back a double fold of paper is attached to the back, one sheet to the back and one to the cover material. The leather or cloth then stands out

from the book, when it is open, being attached to it only at the joints. It is in loose back binding, as said above, that cloth or leather is sometimes glued fast and with great care to the back before the cover goes on, thus taking the place of the leather of the cover in the tight back book. In the best binding this backing extends over through or past the joint and onto the sides or covers; and is also firmly at-



**Showing method of attaching tape slips to a split board leaving a "French Joint."**

From report of the Committee on Leather for Bookbinding. Edited for Society of Arts. London: Bell & Sons, 1905.

tached, at the joint, to the leather of the back. In the Newark library we use for this strengthening material, on 12mo books, bleached muslin (stout cotton cloth), on large books like octavo magazines, and larger, cotton flannel.

This description of the process of binding is a suggestive outline only. Enough has been said, however, to show that the books sewn by hand and

fastened carefully to the cover as described will, if properly made, wear much longer than a book bound by machinery, if bound as above described. But, just as a machine properly handled can produce paper of greater uniformity of thickness and of a quality superior in many respects to the best hand-made paper, so the machines used in binding can, if properly handled, bind books even more strongly than can any save the most careful workman. The possible differences between machine-made books can easily be noted in the cheap novels of the day, which are poorly bound, and well made law books and encyclopædias. These latter are often faithfully put together and will stand almost as much wear as any books ever produced.

CHAPTER III

## Rebinding: Special Notes

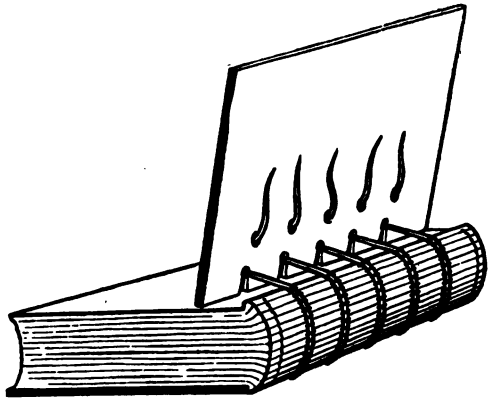
Pull books apart for rebinding with great care. Remove all threads and old paste and glue. Smooth out the backs by beating. Mend the back folds of all leaves that need it; but remember that this can be overdone by one who does not consider carefully the way in which the book is to be rebound. That is, many rebindings are so close and stiff—they ought not to be, but they are—that ragged signatures are sufficiently held without mending.

Put in loose pictures, if they are to be kept; tip, or guard as seems advisable. Frequently in rebinding the illustrations may be dropped with no loss either to the reader's pleasure or the cause of art.

See that the leaves are all in and all complete. Take note particularly of the leaves in front and back. They should not be tipped in. If single sheets they should be guarded and sewed in as signatures.

Add fly leaves of white laid book paper, about 70 lbs. to the ream, and end papers of good rope manilla, about 60 lbs. to the ream or other material according to the book's requirements and your own custom. It is in the joints that the good binder shows his wisdom. It is almost impossible to give such

instructions as to treatment of the front and back of a book as will be followed with good results by the average binder; though I try to outline them below.



**Showing the method of "Lacing in" the "slips" on a "Flexible" bound book.**

If depressions are cut in the board as shown, the slips can be left with an adequate margin of strength without clumsiness.

From report of the Committee on Leather for Bookbinding. Edited for Society of Arts. London: Bell & Sons, 1905.

Get a good sample binding and see what can be done, and let your binder come as near to it as he can.

All books rebound when the sections or signatures are in good condition, sew regular all along on three tapes each a quarter to a half an inch wide. Some say pass the thread through the tape. Some prefer strings; but narrow tapes are better except for large books of many and thin sections which should be

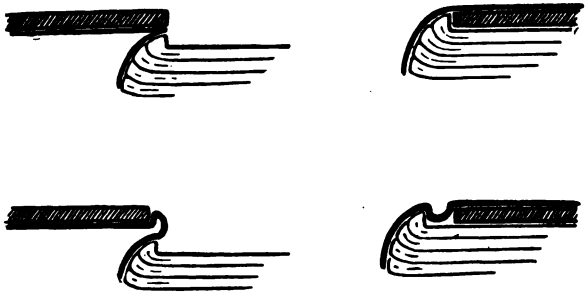
sewn in part at least on strings, "two on," to prevent the piling up of too many threads in the back.

Large books of many thin sections sew thus: divide into five equal parts, sew the first, third and last of these "all along," the others sew "two on." This reduces the number of threads in the back, yet retains the "all along" sewing for those parts of the back subjected to the greater strain.

Whipstitch or overcast all books which are in such condition that they have to be trimmed at the back, being then simply piles of loose single sheets. In this process a light coat of glue is first applied to the backs after they are trimmed. The book is then, as it is sewn, separated into thin sections. As each section, after the first two, is sewed the sewer goes back and passes the needle through the two preceding sections. Each section is thus held by three times as many stitches as the sewer takes in going once along the back. (With some kinds of paper it is better to take up two sections than three; some binders usually take but two). The stitches are taken as close as possible to the margin, not over an eighth of an inch from it. Each section is pasted to the preceding one by a thin line of paste on its margin, applied just before it is laid down to be sewn.

The first and last sections are guarded before sewing with a thin piece of muslin. This applies to all books, whether whipstitched or not. The end sheet or end paper is also guarded with a piece of similar muslin at its fold before it is sewn. The end sheet is sewed all along, even in whipstitched books

After the book is sewn, glued, rounded and backed, a piece of stout muslin is glued to the back. Some prefer thin, tough leather; on large books use cotton flannel. The end of this is pasted down on the inside of the cover when the book is finished under the tapes and under the end paper and the guard



**Showing the advantage of a "French Joint" over an Ordinary Joint.**

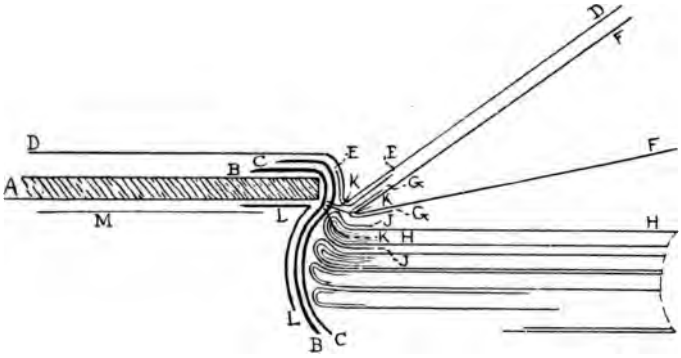
No. 1. A section of an Ordinary Joint with the board open shows that the creasing of the leather is concentrated on one line.

No. 2. A section of a "French Joint" shows how this creasing is distributed over a great surface, and so enables sufficient flexibility to be obtained with much thicker leather than can be used with an ordinary joint.

From report of the Committee on Leather for Bookbinding. Edited for Society of Arts. London: Bell & Sons, 1905.

upon the latter. The other part of the end sheet is pasted to the first fly leaf; and between the two lies half of the guard of the former.

If a book is sewn on tapes or all along in the regular way, do not tip in any leaves and do not over-




**Anatomy of a Joint**

A Board of cover.

B B Unbleached muslin, pasted over back after rounding and backing.

C C Strings or tapes on which the book is sewn.

D D End sheets of 60 pound rope manila. The part at the left is pasted to the inside of the board and becomes the lining paper. B and C being pasted over on to D, when D is pasted to A they are carried with it and lie under the lining paper.

E E Jaconet or thin muslin guard pasted on D before the book is sewn.

F F Fly leaves, of good book paper.

G G Jaconet guard of fly leaves.

Before the book is trimmed F and D are pasted together and become a doubled fly leaf.

H H The first signature of the book.

J J Jaconet guard of the first signature.

K K K Paths of threads.

L Leather back.

M Cloth or paper side.

cast any part of it, but carefully mend signatures or leaves, if much worn, before sewing.

If, as not infrequently happens, the title-page or frontispiece, or both, of a book are tipped in when the book is first put together, it is difficult to treat them properly when the book is rebound. The usual custom is to tip them in again, if loose. The wiser way is to mount them on guards, fold the guard around the signature and sew through them in the regular manner.

It is possible to whipstitch a book, even one which is printed on stiff paper, in such a way that it will be almost as flexible and open almost as easily as if it were sewn on tapes in the regular way, It is possible but difficult. Few have done it. Few binderies, if any, in this country have workers who can and will give to the work of whipstitching the care and thought necessary to produce a good job.

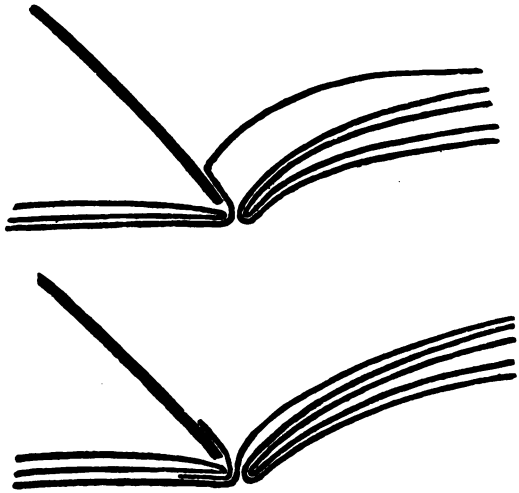
Some strengthen the top and bottom of the back, the head and tail, by a piece of cloth or tape passing over the back of the signatures and held to them by the sewing in a manner difficult to describe. Reinforce the back, if leather or cloth of a character to call for it, by cloth or other material pasted under the fold of the covering at head and tail.

The best paste for use in books is that made of flour in the ordinary way. Stir the flour up in cold water, then add hot water and bring to a boil, and boil for several minutes. Add a little salt and a little alum. If it is desirable to have the paste dry rapidly, add also a little glue.

For titles on books the best material is gold. Silver and Dutch metal are both unsatisfactory.

For printing titles in black on cloth of light color use "canvas ink" made for the purpose.

It is usually wise to trim books when they are rebound. But this trimming should of course be as little as possible.



**Plates**

The first diagram shows in section a plate pasted on to a leaf of a book. This method is faulty, because it takes up some of the back margin of the leaf; if the leaf is pressed back the plate is apt to split off.

The second diagram shows the method of attaching a plate by means of a "guard."

From report of the Committee on Leather for Bookbinding. Edited for Society of Arts. London: Bell & Sons, 1905.

No rule can be given as to the glue to be used. Let your binder be sure that what he uses is good, whether the price he pays be high or low. He can tell whether it is good or not by testing it. Glue pots should be cleaned out frequently. Glue should be treated with judgment as to heat and degree of thickness at which it is used. It is animal matter that quickly changes its character and loses its strength under wrong conditions.

The boards to be used in a book should depend, as to quality and thickness, on the character of the volume they cover. Expensive boards on a book which will probably soon be too dirty to be kept, are not essential.

Neither strings nor tapes need to be laced into the boards on ordinary library work. They hold fairly well if carefully glued down on the inside, and very well if pasted between two boards or into a split in one.

Some books are best bound with tight backs, some with loose. There is no invariable rule in regard to this; it depends partly on the thickness of the book. Very thick volumes should have loose backs, usually.

A good binding will stand this test: Hold the book in your left hand; open the back cover; put the fingers of the right hand on the back of the book, the right thumb on the inside lower left corner of the cover and press as if to break the cover off. If the book is well bound it will not easily give way.

CHAPTER IV

## Bindings for a Library

The following notes on styles of binding suitable for books which are to be subjected to different kinds of use, may be found helpful.

All 12mo books which are to be subjected to much wear and are likely to be worn out or to become too much soiled to keep on the shelf within five years: Bind in half red or light brown cow-skin and green keratol sides. Meer's artificial leather also makes quite good sides. English imperial morocco cloth sides wear and keep clean quite well. Durabline is perhaps best of all; we have given it only a short trial. Three quarters cow-skin some think an improvement. The cow-skin should not be very heavy. Buffing is usually too weak and soon rots. Some pigskin is better than cow-skin, but is expensive in this country. Good cow-skin costs 16½ cents per square foot.

Bind large and small books which are not much used in full dark green imperial morocco cloth, or for a little cheaper binding, full dark blue art canvas. Either of these bindings will last indefinitely if not much handled. Of course it may sometimes be found wise to follow the style of a set in rebind-

ing one volume from it; but in most cases this is difficult to do with good economy in the long run.

Periodicals which are to be much handled bind like other much-used books, in cow-skin, etc., as above specified.

Periodicals and proceedings of societies and other large books which are very little used can be bound also in imperial morocco cloth, as above; but a more economical and very satisfactory binding for them is gray or light green canvas backs, lettered in black, and dark blue canvas or imperial morocco cloth sides. Some have found full durabline excellent.

Reference books which are to be much handled will wear well in brown cow-skin. A better, but much more expensive material is morocco, red and brown being the best colors. Use only the best morocco.

Books bound in leather, unless the sides are cov ered with a very stout cloth or a material like keratol, should usually have corners of the same material as the back. The purpose of these corners is not simply to strengthen the boards, but also to protect the cover material from wear. The three quarters leather book, leather back and corners, as it stands on the shelf is carried almost entirely on the leather of the corners and the back. This saves the cloth on the bottom of the covers from wearing out rapidly. This same purpose is not served by vellum corners, or even metal corners, under the cover paper or cloth. The vellum or metal strengthens the corners, but does not protect them from wearing.

Newspapers bind usually in half duck, preferably of a color that will not show dirt, but light enough to take lettering in black ink. It may be wise to put on duck corners. Cover the sides with inexpensive book cloth.

Marble paper is often used for the sides of newspapers and other books, but soon wears off and is not to be recommended on books much handled.

If newspapers are to be consulted often they should be carefully bound of course. But in a great many libraries it is wise to tie most newspapers up in flat packages instead of binding them.

CHAPTER V

## Specifications

Libraries differ as to bindings in their needs and in their possibilities. Books differ even more. So it seems unwise to offer elaborate specifications. No library can or should exactly follow any one style in its rebinding work. I add, however, the following set of directions for ordinary, much-used 12mo volumes, in the hope that they may be found suggestive. They should be read in the light of all the rest of this book, and not taken as final authority at any point.

1 Books sewed regularly, that is, not whipstitched.

Thoroughly clean off old glue. Mend with paper cut with the grain, or strips of nainsook or jaconet, such leaves as are badly worn. Guard the first and last signatures with jaconet. If the title-page or frontispiece is an insert, paste the guard along the insert and over the first signature. This saves the labor of guarding the insert and first signature separately.

Make two sets of four-page fly leaves by folding once pieces of good quality, 70 pound, white book paper. Guard each of these with jaconet, and place one at the front and one at the back of the book.

Make two sets of four-page end sheets by folding once pieces of 60 to 80 pound rope manila. Guard each of these with jaconet and place one at the front and one at the back of the book.

Use Hayes's standard linen thread of a weight adapted to the book. No. 25 is good for books with light sections, 16 for those with heavy sections, and 20 for those with medium. Sew the book on three stout but flexible tapes, each about half an inch wide. Unless the book has a large number of signatures sew all along throughout. In taking the stitches at the tapes pass the needle through their centers. Sew both fly leaves and end sheets all along.

Leave about three-fourths of an inch of tape projecting when cutting it off.

From here on the process is very similar for this kind of binding and for No. 2, which follows.

2 Books from which the backs have been cut off, whipstitched.

Cut off as little of the backs as possible. Prepare fly leaves as above described, except here paste the jaconet guard only along one side, the outer, of the fold of each of them. This gives firm hold for first overcast stitches.

Prepare fly leaves and end sheets and place front and back as above described.

Glue the back of the book slightly so that it may be divided into signatures of a few leaves each which will hold together.

Saw in the usual way for three strings.

Use good quality, rather loosely woven strings, of

proper size and number of threads for the book in hand.

Put a fine line of paste along the edge of each signature just before it is put in place for sewing.

Sew end sheets and fly leaves all along. In overcasting or whipstitching do not take up more than one-eighth of an inch for the deepest stitches. Make the signatures small and pass the needle through three of them with each stitch, taking the stitch diagonally in such a way that the three rows of stitches in a given signature will be each on a separate line.

Paste the adjoining pages of fly leaves and end sheets together all over, front and back. Trim the book, cutting it as little as possible.

Glue the back slightly, and, when it is partly dried, round the book and then back it. In backing do not break the threads or pull them through the paper. This is especially to be guarded against on overcast, whipstitched, books.

After rounding and backing, glue on the back and over to the sides, passing beyond the jaconet guards, a strip of medium weight bleached muslin.

Measure and cut the boards, which should be of good quality, adapted to the wear the book is likely to have. Cut off the outer corners a very little.

Cut the leather back, of brown cow-skin. Do not pare it save slightly at the edges. Put a little paste on the boards inside to make them stay in place, and set them in place on the book.

Put on the leather, leaving the boards in place, tucking the leather in at top and bottom, head and tail.

When the leather is partly dried, the book having been kept under slight pressure, cover the boards with keratol or the appropriate cloth. The corner fold is made by first turning the cover material in straight across the corner and then bringing in the folds from right and left.

Paste the end sheets firmly down on the inside of the covers. This fastens the book securely into its case.

Letter in gold with large, rather heavy, black-faced (Gothic) letters. Reduce the lettering to as few words as possible.

CHAPTER VI

## Pamphlets

The subject of the care of pamphlets in a library does not come within the field of these notes; but it may be proper to say that experience and observation have led me to the conclusion that many pamphlets are bound and entered in the catalog which are not worth the labor they have entailed. How those should be kept that are thought worth keeping I do not attempt to say. Often those kept are not worth keeping, and still oftener those bound and catalogued are not worth binding. If they are bound, the style of binding they should receive, if they are in fact books in paper covers, is to be decided by the same rules as is the same question in regard to other books. If they are in fact pamphlets—a few pages with no cover, and must stand on the shelf and will be little used, a cheap binding may be made thus: Fold once a sheet of stout paper to the pamphlet's size; cut two boards for covers, a little narrower than the pamphlet; paste them to the paper mentioned about a quarter of an inch from the back; paste a strip of book cloth down the back and cover to the boards; paste the cover (removed before putting on the sheet of paper mentioned) to the boards, front and back; sew through cloth and pamphlet, about

an eighth of an inch from the back, with stout thread, using the binder's stitch through three or five holes as seems advisable, trim. This is simple, strong and inexpensive. If the pamphlets consist of one signature only the method just described can be followed; but the sewing should be through the back, a saddle-stitch, with the knot inside. The binder's knot or stitch is thus made: Having three holes for the thread, go first down through the center one, back through one of the end holes, down again through the other end hole, up through the center, and tie the two ends over the thread which passes from end hole to end hole. With five holes the process is similar and easily followed.

I have had many single copies of magazines bound for lending, at about 15 cents each, after this style: Take off covers; trim; remove table of contents if it faces the cover; paste strip of strong cotton cloth down the back, and extending about an inch over the sides; staple this on with at least three staples in the same line with the staples which hold the magazine together or sew with stout thread through five holes; cut covers as for an ordinary binding; paste them to the strip; cover all over with art vellum; line covers with paper; (this lining can be put on all over as the first step in the process, and pasted to the covers after they are on, thus forming the end paper); paste the front cover of the magazine on the front in such a way that the date line down the back comes on the back of the new cover. This is neat, convenient and quite durable.

Covers of strong paper attached to the outside of magazines we have not found at all satisfactory. Such covers are held to the magazine only by the paste which holds the original cover, to which it is attached, to the pamphlet. They curl, they soil easily, they soon come off. "Well done or not at all" is a good rule here as in bookbinding.

A very neat pamphlet binding, for pamphlets too large to be saddle-stitched, is the following:

Cut two pieces of smooth, hard, "flat" paper the size of the pamphlet; along one edge of each paste a strip of thin cotton cloth, bleached muslin, about half an inch wide; lay one piece each side of the pamphlet, cloth strips at the back, and sew the pamphlet through these strips, close to the back, with three holes or five as seems advisable. Make two end-sheets of two leaves each, the size of the pamphlet; guard each with muslin; paste these to the first sheets, all over, one on each side of the pamphlet; cut boards and paste them down on the outer halves of the end-sheets, (each end-sheet has now become, one-half the lining paper for the cover, the other half, half of a double fly leaf); put on a back of art vellum, leather or other material; paste on the pamphlet's cover; trim. This binding is very strong, very neat, opens quite easily and will wear well. The boards can be covered all over with cloth, and the binding will then wear much longer.

Covers for magazines in a reading room are of endless variety, and none is perfect. I do not approve of any which necessitates making holes through the

back of magazine or journal. If such must be used, the best is that with flexible metal strips, which pass through holes. The type is familiar; variations on it are endless.

Mr. Stetson of the New Haven Library has improved on those devices, which consist mainly of a rod of metal passing down along the back of the magazine and anchored at each end. His device is difficult to describe. He has no patent on it and offers it to librarians at cost, with or without accompanying covers.

Ballard's clips find favor with many librarians, for both pamphlets and magazines. They hold things together neatly and securely, and hold magazines into covers of cloth or leather quite effectively. They are strips of sheet steel, of several widths, bent into about three-fourths of a circle. Small steel levers fit into cleverly adjusted holes and make opening easy.

CHAPTER VII

## The Literary Side

After satisfactory materials and methods of binding for a library have been discovered and adopted, there still remain many questions which can be well answered only by one having a wide knowledge of books. Nor is a general knowledge of books alone enough to qualify one to answer wisely these questions. Close acquaintance with the library's policy in regard to book-saving and book-buying and of its attitude toward the demand for popular and ephemeral fiction; knowledge of its reference work; of the amount of handling its books receive by the public, and of its financial condition and policy—all this and much besides the person in charge of binding should have before she can make wise decisions. And particularly she needs knowledge of paper, editions, prices and similar matters.

Take fiction for example. More than half of the binding bills of most free public libraries are probably chargeable to novels. One of these comes to the hands of the person in charge of binding in such condition that at the first glance it seems desirable to rebind it. Let us suppose that it is still in publisher's cloth; is quite soiled outside, but still fairly clean within; that the cover has parted from the book

in front; that several leaves are loose and two of them frayed at the edges; that at the back the outside sheets of several signatures are nearly worn through or broken; and that the label is off. Should it be rebound; or what should be done with it? Before deciding its fate, questions like the following must be answered:

If this is not the only copy of this book now in the library, are the other copies in good condition?

If they are, can the library spare this copy because the demand for this particular title is past? And is it not better economy to throw it away or sell it—as it will probably never be wanted again—than to spend money in binding it?

That is to say, if it is bound, will it not stand idle on the shelf?

If it continues to be somewhat popular, and this copy would get some use if it were replaced, still, is it a book the use of which it is the library's policy to encourage?

If not, has it not served its purpose and should it not be put away, rather than entail on the library another expense item in cost of binding?

If it is the only copy in the library, is it a book the library wishes to retain or has it been in effect on trial, and has proved not to be worth keeping?

If so, would not the binding of it be a use of money far less justifiable than its original purchase?

Or is it perhaps of interest now simply as a part of the history of fiction and so still worth keeping?

But, if kept for this purpose, does it need binding

at all? Will not a little mending make it hold together sufficiently well? Perhaps the best plan would be to reclassify it for the literature section, wrap it in paper, mark the wrapper, and put on the shelf.

If it is a good book, in constant demand, the question is still not a simple one. Is it on poor paper, so poor that in our style of rebinding it will last but a short time? If so, would not a new copy be a better investment than the rebinding of this one?

If the paper is good enough for rebinding, will it stand mending and further wear without making its ultimate binding very difficult?

If there are other editions of this book obtainable, does this sample indicate that this particular edition is the best one to buy hereafter?

These and many other questions confront the librarian every time a book, of any kind, comes up for binding. Because they are not wisely answered the shelves of every library show examples of the unwise expenditure of money. To take a specific example in this same field of fiction. The library has several sets of Cooper. In each of them is the Chainbearer. Consider any one of the library's copies of this book: No one reads it. But mere shifting on the shelf gradually wears it out. It goes through the bindery, and, being by Cooper, and a novel, it is bound, in the same style as the Spy which happens to go with it, in half leather. The Spy is used; the leather on it keeps soft and pliable and wears a year or two, until the book is too dirty to keep it longer. But the Chainbearer stands untouched and its leather

hardens and breaks. It must be bound again within three or four years, even though it has not been lent once in that period. If it had received a plain cloth binding, that binding would have cost less and lasted indefinitely. If it had been thrown away the library would have been the gainer.

The problem is not less complex when books in classes other than fiction are up for consideration. Many of them are rarely used; why rebind them at all, no matter how broken? To tie a string about them or to wrap in paper and mark them would often be wiser economy. Often they are single volumes from long sets, an edition, for example, of some history bound about 1800. The binding is calf. In rebinding, to match the set is very unwise, for all calf now on the market will rot in a few years. It must be bound, let us suppose, as it is occasionally called for; yet it will not, like a popular novel, wear out or become unbearably dirty in a half century.

Shall it be put in morocco? This would be a mistake, for it is doubtful if present-day morocco will last 50 years, probably not half that time. The only alternative is cloth, and that with no leather title label on the back. One of the best things is, for a large book, heavy duck back, light gray or light green, lettered in printers' ink, with sides of any good book cloth. This spoils the looks of the set. Moreever, the cloth catches dust and dirt, and grows soft and flabby. But it is today one of the few safe bindings. If the book is small, full art vellum or imperial morocco cloth is better.

So, as I have said, paper, leather, cloth, sewing, joints, gold, and many other things the librarian must know; and to these must add knowledge of literary 'values,' popularity of books and authors, editions, prices and a score of other things before he can be sure, if he ever can be sure, that he is really binding economically, in the long run.

CHAPTER VIII.

## Paper Making: A Brief Outline

Much of the paper used in books today is made of wood. Wood is converted into paper-making material in three ways. In one, it is cut into convenient lengths, stripped of its bark and finely ground on grindstones, and bleached. The product is called ground wood pulp. The paper made from this pulp is hastily and cheaply put together, has little strength, and soon turns yellow and grows brittle. There is often added to ground wood before making it into paper, more or less sulphite or soda pulp, usually the latter, the product of another process of turning wood into paper-making material.

In the sulphite and soda processes the wood is freed of bark, cut into small pieces, and reduced to a pulp by being heated with water and chemicals under pressure in an air-tight steel tank or boiler. Sulphite and soda pulp, which get their names from chemicals used in reducing the wood to pulp, have longer and better fibre than ground wood pulp. In both processes certain means are used to whiten the fibre and free it from sap, gum, and other things which would prevent it from acting properly in the paper-making machine, or would tend to make it

grow yellow or spotted. Spruce or basswood are the woods chiefly used, and they seem to submit themselves to treatment better and to give a longer fibre than other kinds. The pulp made from rags is often mixed with sulphite and soda pulp. The rag-pulp fibre improves the quality of the resulting paper for reasons not easily set forth. Paper made entirely of wood may be of a good quality, especially sulphite papers. The popular outcry against wood paper is based on the fact that much of it is made very cheaply and poorly.

The rags used in paper making are nearly all cotton. They are not all of them rags in the ordinary sense of the term. Many of them are cuttings from clothing factories, and have never been used. New rags do not act the same way under the treatment which changes them to paper pulp as do the old ones. The paper made entirely from new cloth differs somewhat from that made from old rags. The best book papers, however, contain only stock prepared from old rags.

The process of changing rags into paper is very similar to that of changing wood into paper. The rags are cleaned, freed from foreign substances, cut into small pieces, thoroughly washed, bleached, and then beaten to a pulp, under water, by machines which convert them into a soft, homogeneous, creamy mass, called technically stuff, and yet preserve the greatest possible length of fibre. This process of beating rags into good paper-making material requires care and considerable time. If the process is

hastened unduly the resulting material is not so good.

Paper is made from other materials besides wood and cotton; but nearly all of that used in books in this country is made of one or other of these two materials, or of a combination of the two.

The stuff produced as described, almost milk-like in its consistency, is pumped from a tank, in which it is kept constantly stirred to prevent the fibre from settling, onto the paper-making machine. This machine is an evolution from a simple hand appliance which was used by paper makers for several centuries. It was a shallow tray with a bottom made of a network of wires. This was held in the hands, dipped into a vat containing the paper-making material, and as much of the latter taken up on the wires as in the judgment of the maker was sufficient for a sheet of paper. It was then shaken gently, and deftly handled, until the water, running through the wires, left on the latter, and spread evenly over them, a layer of fibres. These dried and matted together in a few seconds sufficiently to enable the maker to turn them out on a blanket; on this another blanket was spread, and on this was laid another layer of fibres. The skillful maker of paper by hand (in a few places in this country the craft is still practiced) can secure considerable evenness in the layers of fibre or pulp on the wire of his frame; but the layer is never of quite the same thickness throughout. Handmade paper can sometimes be distinguished by these variations in its thickness. Machine-made paper is of nearly uniform thickness. In the process of taking

up from the vat by hand a thin layer of stuff, the maker wove together the fibres in every direction by skillful and delicate movements of the frame. A paper-making machine cannot so thoroughly interweave the fibres. Paper made by hand, therefore, has a quality which cannot be secured on a machine. This peculiar texture of handmade paper of the first class delights the connoisseur, and furnishes a printing surface superior, in some respects, to any machine-made paper.

The paper-making machine consists primarily of an endless roll of wire screen, similar to that forming the bottom of the shallow tray used in making paper by hand. This wire screen, stretched around rollers, travels almost horizontally away from a broad shelf from which it receives a stream of stuff pumped onto the latter from the tank before mentioned. As the pulp pours out onto this wire it settles over the screen, and is woven together by the latter's oscillating and forward movement, and by the time it reaches the end of the screen is sufficiently matted and dry to hold its shape, the water being removed by suction. It is then picked up by a roller, and goes through a succession of rolls, varying in size, number, character, heat and pressure, according to the quality of the paper being made and the surface desired thereon. In some cases, toward the close of the process, it is passed through a tank containing a thin mixture of glue and water, called size, and then is again dried. Coming out as paper at the end it is cut into lengths and piled, or gathered on a roll.

The wire diaphragm onto which the paper pulp first pours, and during the passage over which it is worked into a mat, the water meanwhile being extracted from it, is of varying styles. If perfectly plain the resulting paper is almost without marks, and is said to be wove. If made of wires of different sizes properly arranged the paper, as it lies on it, receives deeper impressions from the larger wires than from the smaller and the former appear as light lines running through it when finished. Paper thus marked is called laid, to distinguish it from the wove. As the paper comes from the wires it passes under the dandy roll. This roll sometimes has figures or letters raised on its surface. These impress themselves on the soft paper and produce a greater transparency where they touch, sometimes reducing the thickness, and give the finished paper what is called a watermark. It is so called not because it is made of water or by water, but because it looks as though it were drawn on the paper with a point dipped in water.

Endless varieties of paper can be made from the same materials. It may contain more or less rag; may be beaten to a greater or less extent and with more or less care; may be spread thicker or thinner; may be rolled on hot rolls, or polished, more or less; may receive more or less sizing; may be dyed in a vat before it starts for the machine, or dipped in dye after it is made, or color may be applied to one surface by machine. The fibre may be carelessly produced, and the chemicals used in bleaching and

cleaning it may be only partially neutralized, with the result that the paper will soon act as if being eaten with acid, and will rapidly turn yellow under a bright light.

The ordinary observer can distinguish between very poor and fairly good paper in books. He cannot distinguish between paper of fairly good quality and the best.

The paper used in newspapers is nearly all made entirely of ground wood. Most of it is made as cheaply as possible, and soon grows brittle and dark in color. This is of little consequence in most cases. For the ordinary newspaper the paper has served its purpose if it looks well for twenty-four hours after it is printed and exposed to the light.

Books are generally printed on paper which has not been very highly polished. Ink is taken from the type more readily by paper of this kind, especially if the latter be rather soft in texture, so that the press drives into it the face of the type bearing the ink. Modern processes of reproducing pictures give plates for printing, many of which are made up of very fine lines placed very closely together and having very shallow depressions between them. To print from these with good results the paper used must have a very smooth, highly polished surface. The press drives soft paper down into the narrow places between the fine lines and blurs the impression of the cut. Newspapers which use process-cuts of the kind mentioned are obliged to use paper with a smooth surface to get good results. This

smooth surface is generally produced, as already noted, by passing the paper between hot metal rollers, a process called calendering. In a more expensive process, called plating, the paper, cut into sheets, is laid between sheets of zinc until a pile of several inches in thickness is formed, and this pile is passed several times under rollers exerting a heavy pressure. This smooths, polishes, and hardens the paper. Much of the paper used for illustrations in books has a surface made by applying a coating of clay or other material to it and then polishing it. Quite good results can be obtained with fine line cuts on calendered or plated paper without the addition of a coating of clay. The illustrations on coated paper which are found in books are very commonly printed separately from the book itself, which is on ordinary uncoated paper, and inserted separately. Generally these inserts are not carefully fastened in and cause much annoyance by falling out after the book has been subjected to a little use.

Recently paper makers have succeeded in producing a paper which has a smooth surface without the high polish usually found on that which is coated, or highly calendered. The polished surface of these papers, especially of the coated, is very objectionable to readers, light being reflected from it in an unpleasant way.

It will be seen from what has been said that it is difficult so to describe what we may call good book paper that it can be readily distinguished. Con-

stant study and careful comparisons of the papers one meets in books will enable one to judge of them with some success. One who has much to do with books should take note of the paper of which they are made, and learn to distinguish between poor and good, and the good and the best, as far as possible. This is especially desirable for one whose work with books includes their rebinding and repairing. Coated paper breaks easily, the stiffening added to it by the coat of clay giving it a tendency to fall apart as soon as it has been folded in the same place a few times. Soft and fragile paper, such as is found in many books, will stand very little wear at the joint in the back. Paper not carefully bleached and freed from the chemicals used in bleaching, rapidly discolors at the edges where exposed to light. Such facts as these, and many others, will be found useful when one comes to have books rebound, or attempts to repair them.

That side of the paper which touched the wires on which it is made is different from the other. This difference is usually visible to the trained eye. It is often taken into consideration in fine printing.

As the pulp flows out upon the wires it tends to mat together more thoroughly along the line of flow than across it. This gives paper a grain, along which it tears and folds more readily than across it. This fact also is often taken advantage of in good printing.

All paper expands or stretches when wet. This is to be kept in mind in mending books. An added strip, pasted on, usually draws and wrinkles, when it

dries, the paper to which it is applied. Hence the rule, in mending, to use thick paste and apply the pasted sheet or strip to its place as quickly after pasting as possible.

CHAPTER IX

## Leather: General Notes

The names given to different kinds of leather come sometimes from the character of its surface, that is, from the "grain," or roughness or corrugation it has; sometimes from the animal it once covered; sometimes from the method of tanning; sometimes from the fact that it is part of a skin which has been split; sometimes from the place or country where it is made or where the animal it once covered lived, and sometimes from a combination of two or more of these.

The subject of the leathers used in bookbinding is a very difficult one. Tanners, dealers, and binders, dictionaries, encyclopædias, and books on tanning disagree with one another as to the proper terms to use in speaking of leather of different kinds. Imitations are many, and very successful. In the list below I have tried to follow the usage of binders; but I am sure no expert would accept it throughout as correct.

With this variety in definition goes a corresponding variety in character in leather of the same name. Different skins tanned in the same way, apparently, and called by the same name by dealers and binders, will wear, some well, some not so well. The only

quite definite assertion which can be made is, that of modern leathers, few save the best morocco will keep its strength for any length of time in an American library, and that usually not much over 20 years.

As the remarks which follow indicate, English leather makers have recently procured leathers guaranteed to be dressed on the lines recommended by the Society of Arts Report. See also the revised report, and the little volume, with samples, called Leather for Libraries by Hulme, Parker and others.

Leathers made from the skins of animals of the same kind, the goat for example, though made by the same process, vary somewhat with the animals' sex, age when killed, the food on which they lived, the climate in which they matured, and their manner of life, and if females, with the fact that they have or have not had young. Also, the leather made from the skin of one part of the body differs materially from that made from the skin of another part.

Moreover, some dyes seem to hasten decay, some to retard it. Red seems least hurtful, black the most so; though this difference is probably due more to chemicals used in the preparation of the skin for the dye than to the dye itself. Brown generally stands well; most other colors, except red as stated, do not.

With all these, and other, factors to be taken into consideration it is evident that full knowledge of leather is not given to anyone. In a general way it may be said that good leather cannot be told by name, or looks, or feel; but only by trial. Dealers, even, cannot tell the good from the best.

The sum of all advice is, having found, by your own or others' tests, that a certain leather is good, use it as long as you can get it. The British museum sets a good example in this. It has in recent years bound many thousands of volumes in morocco made by Meredith-Jones & Sons, Wrexham, Wales, which experience thus far shows to be very good. We have tried it and in the brief trial we have given it, found it excellent.

Dr. J. Gordon Parker, Herold's Institute, Drummond Road, Bermondsey, England, has made an arrangement with the council of the Library Association of England by which he has become their official examiner of leather and he will test samples for acids, nature of tannage, etc., at reasonable rates.

John Muir & Son, tanners and curriers, Beith, Scotland, offices: 3 Arundel st., Strand, London, W. C., England, prepare pigskin for bookbinding. It costs in small lots without duty about 25 cents per square foot.

J. Meredith-Jones & Sons, Ltd., Cambrian Leather Works, Wrexham, Wales, make bookbinders' leathers guaranteed to be dressed on the lines recommended by the Society of Arts Report, and free from mineral acids. Specialty: Welsh sheep.

Much has been written on the wearing and lasting qualities of leather. The best discussion of the subject is the Report of the committee on leather for bookbinding, made to the Society of Arts, England, and published in its Journal, July 5, 1901. I allude to this report frequently, and for convenience speak

of it as "Report '01." The committee who made this report found that the leather made today does not last as long as that made 75 years ago. They found that the heat and fumes of gas help to hasten the decay of the leather on books. These factors are more effective in American superheated libraries than in English ones. If books bound in leather are much handled they last longer than if they stand undisturbed on the shelves, because the oil from the hand helps to keep leather soft, pliable, and alive. The committee concluded that no leather, with the sole exception of Niger goat, made by the natives on the river Niger in Africa, and imported just as it leaves their hands, can be fully recommended as free from elements which lead to its early decay. Since this report was published imitations of this leather have been put on the market, and it can no longer be relied upon. We have found it beautiful in color and texture, easy to work and wearing admirably on large and much-used books. But it does not keep clean as well as a good morocco of coarse grain. It is very expensive, and first-class morocco is probably better where strong, enduring leather is advisable, which is only on books which are to be much used.

The most important points made in the report of the Society of Arts committee on leather for bookbinding, referred to above are the following:

Books bound during the last 80 or 100 years show far greater evidence of deterioration than those of an earlier date. Many recent bindings show evidence of decay after so short a period as 10, or even

five, years. Modern leather is certainly far less durable than old leather.

The most prevalent decay is a red decay, and this may be differentiated into old and new, the old red decay being noticeable up to about 1830, and the new decay since that date.

Another form of deterioration, more noticeable in the newer books, renders the grain of the leather liable to peel off when exposed to the slightest friction. This is the most common form of decay noted in the most recent leathers.

Decay is caused by both mechanical and chemical influences. Of the latter some are due to mistakes of the leather manufacturer and the bookbinder, others to the want of ventilation, and improper heating and lighting of libraries. In some cases inferior leathers are finished (by methods in themselves injurious) to imitate a better class of leathers, and of course where these are used durability cannot be expected. But in the main the injury for which the manufacturer and bookbinder are responsible must be attributed rather to ignorance of the effect of the means employed to give the leather the outward qualities required for binding, than to the intentional production of an inferior article.

Embossing leather under heavy pressure to imitate a grain has a very injurious effect.

The shaving of thick skins greatly reduces the strength of the leather by cutting away the tough fibers of the inner part of the skin.

The use of mineral acids in brightening the color

of leather, and in the process of dyeing, has a serious effect in lessening its resistance to decay.

Quite modern leather dyed black seems, in nearly all cases, to have perished, although old black morocco (sixteenth, seventeenth and eighteenth centuries) in good condition is not uncommon.

In a very large proportion of cases the decay of modern sumac-tanned leather has been due to the sulphuric acid used in the dye bath, and retained in the skin.

Tobacco smoke has a darkening and deleterious effect on leather bindings.

Light, and especially direct sunlight and hot air, possess deleterious influences which had scarcely been suspected.

Gas fumes are the most injurious of all the influences to which books are subjected, no doubt because of sulphuric and sulphurous acid they contain. They are especially injurious to books on the upper shelves of a high room.

The importance of moderate temperature and thorough ventilation of libraries cannot be too much insisted on. With proper conditions of ventilation, temperature, and dryness, books may be preserved without deterioration, for very long periods, on open shelves.

On the other hand, as a general rule, tightly fitting glass cases conduce to their preservation.

Leather bindings that have been coated with glair or varnish seem to keep better than those without.

The bookbinder shares, in no small measure, with

the leather manufacturer and librarian, the blame for the premature decay of leather bindings.

Books are sewn on too few and too thin cords, and are not firmly laced into the boards. This renders the attachment of the boards to the book almost entirely dependent on the strength of the leather.

The use of hollow backs usually throws too much strain on the joints in opening and shutting the book.

If the headbands are not strong the leather of the back is apt to become torn.

The leather is often made very wet and stretched a great deal in covering, with the result that, on drying, it is further strained, almost to breaking point, by contraction, leaving a very small margin of strength to meet the accidents of use.

The use of oxalic acid for washing backs of books, or of leather for bookbinding, is fatal to their durability. Vinegar, even in its pure state, is injurious.

Paste should be used in a fresh condition, otherwise it is liable to undergo an acid fermentation, and to favor the growth of injurious moulds and bacteria.

In all contracts and specifications for bookbinding, the use of East India-tanned goat and sheep, whether retanned or not, should be absolutely forbidden.

It appears to be the general opinion that leather, and especially Russia leather, lasts better on books that are in constant use. This is attributed to the slight amount of grease absorbed by the leather from the hand, and it is suggested that possibly a

suitable dressing may be discovered which would have a similar effect to that produced by this grease.

While the leather now used for binding books is less durable than that employed 50 years and more ago, there ought to be no difficulty in providing leather at the present time as good as any previously made.

It is possible to test any leather in such a way as to guarantee its suitability for bookbinding.

A reissue of the report summarized above was published, in cloth, in 1905. It is entered in the list of books at the end of this volume. In this reissue the arrangement of the original report is somewhat modified; a paper on leather dyes and dyeing has been added; the report of the scientific sub-committee has been practically rewritten; many illustrations have been added, some of them colored; 12 samples of leather prepared in accordance with the committee's conclusions are inserted; and the volume is handsomely printed, and bound in cloth. The reissue, however, does not make necessary any change in the above summary. It is from this edition that I have taken all but two of the illustrations in this book.

## CHAPTER X

### List of Leathers, with Descriptive Notes*

**American Russia.** See Cowhide.

**Bock morocco.** The name given to a leather made of Persian sheepskin usually finished in imitation of morocco. It neither wears nor lasts well.

**Buffing.** The name given to the thin sheet of cowhide taken off in the operation of buffing or splitting. It is usually of very inferior quality.

**Calf or calfskin.** Leather made of calves' skins. It has a smooth and uniform surface. It was formerly much used in binding, and is very beautiful; but that made in recent years lasts only a short time, soon growing hard and brittle and even falling into dust. Even when new the surface is easily broken and torn.

"During the latter part of the eighteenth century it became customary to pare down calf until it was as thin as paper. Since about 1830 little sound calf seems to have been made, as, whether thick or thin, it appears generally to have perished, turning red and crumbling into dust."

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*The quotations are from the report of Committee on leather of the Society of Arts, England, 1901.

"Sprinkled or marbled calf are in a specially bad state."—Report '01.

See also Divinity, Kip, Marbled, Sprinkled, and Tree calf.

**Cowhide.** The thick, coarse, leather made from the skin of a cow. By binders it is commonly known as "American Russia," or "imitation Russia." It is much used for binding popular books of fiction. It has a slight grain or corrugation on the surface, is tough and strong, takes gilding well, wears well and if handled much is usually quite durable.

**Crushed levant.** Levant morocco with the grain crushed down until the surface is smooth and lightly polished. In fine binding this is done by hand after the leather is on the book. Most crushed levant morocco, however, is surfaced by a machine before the leather is applied.

**Divinity calf.** A dark brown calf book binding decorated with blindstamping, and without gilding; so called because formerly used in binding theological books.

**French morocco.** An inferior quality of levant morocco, having usually a smaller and less prominent grain.

**Grain.** The term applied to the outer side of a piece of leather, from which the hair was removed. This word is also used in describing the different kinds of surface given to leather in the making, often with a qualifying adjective, as, seal-grain, like the grain on sealskin; coarse grain; pebble-grained,

that is, grained in an irregular manner, as though numerous small pebbles of different sizes had been pressed upon its surface; water grain, smooth grain, brass board grain, usually put into cow-skin, etc.

**Imitation Russia.** See Cowhide.

**Kip calf.** Made from the skin of a heifer; much stronger than ordinary calf.

**Law sheep.** Law books are usually bound in sheep left wholly uncolored, hence the term.

**Leatherette.** Cloth or paper made to look like leather. There are many kinds used in binding, some of which look very well and wear about as long as poorer kinds of cloth.

**Levant morocco.** Originally made in the Levant from the skins of Angora goats. A superior quality of morocco, having a large and prominent grain. French levant morocco has long held its place as the best of all leathers for bookbinding.

**Marbled calf.** Calf so treated with acid that it bears some resemblance to marble.

**Morocco.** Leather made from goatskins, tanned with sumac, originally made in the Barbary states, but afterwards very largely in the Levant, and now produced in Europe and America from skins imported from Asia and Africa. The peculiar qualities of true morocco are great firmness of texture, with flexibility, and a grained surface, of which there are many varieties. This surface is produced by a process which consists largely in rolling and folding, called graining. True morocco is of ex-

treme hardness, and makes the most durable book bindings; it is used also for upholstering seats and for similar purposes, and to a certain extent in shoemaking.

"Early specimens of red morocco, from the sixteenth to the end of the eighteenth century, were found in good condition, and of all leathers noticed this seems to be the least affected. In the opinion of the committee, most of this leather has been tanned with sumac or some closely allied tanning material. Morocco bindings earlier than 1860 were generally found to be in fairly good condition; but morocco after that date seems to be much less reliable, and in many cases has become utterly rotten."—Report '01.

Leather called morocco, sometimes with a qualifying adjective, is now made in Europe and America. Much of this is very good, even when made, as it often is, from other skins than those of goats. Even the experts seem often unable to distinguish the good from the best. None of it is to be condemned or approved because it is or is not made in the Levant, or from goatskins.

**Morocco.** The name given to any imitation, often made of sheepskin, of the genuine morocco.

**Morocco.** For Bock, French, Levant, Persian, Turkey morocco, see the several words.

**Mottled calf.** A light brown calf book binding, made to look mottled by treatment with acid.

**Niger goatskin.** Brought from Africa by the Royal

Niger Company. A native production. It has a very beautiful color and texture, with no grain. It has stood all the tests given it without serious deterioration. It does not keep clean under handling as well as a good coarse-grained morocco. Especially recommended by the committee appointed to investigate leather by the Society of Arts, of England.

**Persian morocco.** A kind of morocco leather much used in bookbinding. It may be finished by graining in several styles. It is mostly made in Germany, from the skins of hairy sheep called Persian goats, whence its name is derived.

"East Indian or 'Persian' tanned sheep and goatskins, called 'Persian morocco' or 'Persian sheep,' which are suitable for many purposes, and are now used largely for cheap bookbinding purposes, are extremely bad. Books bound in these materials have been found to show decay in less than 12 months, and probably no book bound in these leathers, exposed on a shelf to sunlight or gas fumes, can be expected to last more than five or six years."—Report '01.

**Pigskin.** Leather made of pigskin. It is very tough and if constantly handled wears well.

"Modern pigskin, if genuine, seems to last very well in some colors and in an undyed condition; but some colored pigskin bindings have utterly perished. Pigskin is naturally a hard and rather stiff leather and is suitable for large books rather than small, and for books which are much handled." "If

submitted to severe softening processes in manufacture its durability is very small."—Report '01.

**Russia leather.** A fine leather prepared in Russia, and imitated elsewhere, by very careful willow-bark tanning, dyeing with sandalwood, and soaking in birch oil. It is of a brownish red color, and has a peculiar and characteristic odor. The genuine is not often used in binding; it is not as strong as cowhide.

"In nearly all samples of Russia leather a very violent form of red decay was noticed. In many cases the leather was found to be absolutely rotten in all parts exposed to light and air, so that on the very slightest rubbing with a blunt instrument the leather fell into fine dust."—Report '01.

**Roan.** Leather made of sheepskin and not split. See Sheepskin.

**Sheepskin.** The commonest leather used for binding. When unsplit it is called Roan. When split in two, the upper half is called Skiver, the under or fleshy half a Flesher. This leather is easy to work, takes gold lettering easily, and looks fairly well on a book. But it is not strong, and most kinds dry out and break within three to five years, even if much handled. The leather made from the skin of the sheep is not all alike. The same remark, already made, applies to all the other leathers in this list. The skin from some mountain-bred sheep, for example, if well tanned, makes a good leather.

"Sheepskin bindings of the early part of the

century are many of them still in good condition. Sheepskin, in a fairly natural state, seems to keep its flexibility, but it is very easily damaged by friction. Since about 1860 sheepskin as sheepskin is hardly to be found. We have instead sheepskins grained in imitation of various other leathers, and these imitation grained leathers are, generally speaking, in a worse condition than any others, excepting, perhaps, some of the very thin calf bindings."—Report '01.

**Skiver.** The outer, hair or grain side of sheepskin which has been split. It is commonly the thinner of the two parts, as when the inner is prepared for chamois. It usually looks well, and is easily worked; but is not strong. Much used for bindings. See Sheepskin.

**Smooth calf.** Plain or undecorated calf.

**Split leather.** Leather split by machine. Two or more pieces or splits are thus obtained either of which may be used. The inner layer is usually of inferior quality. Sometimes leather is split simply to secure uniformity of thickness in the outer parts.

**Sprinkled calf.** Calf so treated with acid that it looks as if it had been sprinkled with a dye.

**Tree calf.** A bright brown calf stained by acids in conventional imitation of the trunk and branches of a tree.

**Turkey morocco.** Made of goatskins from Turkey. It is very strong, durable leather; expensive, but worth the money.

CHAPTER XI

## Book Cloths and Imitations of Leather

**Art canvas.** A book cloth, made in several colors by the Holliston Mills, 67 Fifth av., New York; Jos. Bancroft & Sons, Wilmington, Del. (A. D. Smith, 35 Thomas st., New York, agent); the Interlaken Mills, 111 Duane st., New York, and others. It is known both as art canvas and buckram. The Newark library, in experimenting to find a substitute for leather, tried in succession the green, red, brown and blue. The green proved the poorest, the blue made by Holliston Mills the best, in wearing quality. One reason for the poor results with all the colors tried, with the exception of the blue, is that the cloth of these colors is made with a colored thread running one way and a gray or white thread the other; the colored thread soon wears off on the edges and corners and the gray thread gives the book a very dingy appearance. Dark blue has given us the best results. Art canvas costs 20 cents a square yard by the roll of 40 yards.

**Art vellum.** A book cloth made in several colors and styles of finish by the firms which make art canvas. It is not suitable for full binding on books subject to much wear; but is very good for sides on

fiction not much used, and other books. We have used it with satisfaction for some time on some classes of books. It costs about 15 cents per square yard. Most publishers' bindings are in cloth of the art vellum grade.

Our own experience with art canvas and art vellum for full binding on books much used seems to have been that of many other libraries. Popular books in these materials from about a dozen public libraries all seem to have worn poorly. The joints soon become soft and loose; the corners fray out and look ragged; the gold of the titles does not stand out well when first put on and rapidly grows dim.

**Buckram.** Properly a coarse linen cloth, stiffened with glue or gum. Most buckram, so-called, is made of cotton. See also Linen finish buckram, or Art canvas.

**Buffingette.** See Keratol.

**Canvas.** See Duck.

**Duck,** sometimes called Canvas. This is made by many firms in a wide range of colors and qualities. It is in fact a heavy cotton cloth. Slate-colored duck 28 in. wide, 10 oz. to the yard, costs about 18 cents per yard. This is a firmly woven, smooth material. We have used a light green. This sets out black ink titles very well, and seems to show the marks of handling less than any other color. It is a very desirable binding for heavy books not much used. All such books should be stiffened by past-

ing or gluing cloth on the backs, if loose back, and should be reinforced at head and tail.

This duck or canvas is not suitable for full binding. It has been much used in this way by many libraries on popular books. The results are very dreadful. A full duck juvenile book soon looks disreputable and even positively offensive.

Duck can be bought of any dealer in binder's material. The light green mentioned is from Leclercq & Co., 22 Elm st., New York. 20 cents per yard, yard wide.

**Durabline.** A very strong, handsome, waterproofed, washable cloth, made for Chivers and much used by him.

**English linen** or **Low buckram.** A linen cloth, highly polished, well colored, strong, durable, made in England, and costing in this country about 60 cents per square yard. In De Jonge's list (De Jonge, dealer in leather, book cloths, etc., 69–73 Duane st., New York) it is called Low buckram. We have used it for the backs of books, light and heavy. It promises to stand indefinitely if not much handled. Under handling it grows soft and flabbly like other book cloths, though not rapidly, and without losing its strength. We have discarded it for the books we first tried it on, periodicals subject to much use. It is not easy to letter in gold by hand, and does not hold gold well under wear.

**Imperial morocco cloth.** A grain-finished linen-thread cloth manufactured by the Winterbottom Book Cloth Company of England. It is made in

different colors; of these the library has tried but one, the green. On books which have some, but not constant use, it is a very good substitute for leather. It takes lettering well, and wears better than any of the cloths the library has tried. The price is 45 cents per square yard by the roll, fast color, duty paid. (De Jonge & Co., 69–73 Duane st., New York).

This morocco cloth serves quite well as a full binding for popular books, though it has not given the Newark library as much satisfaction as to wear as half-leather.

**Keratol,** the B B B grade, or Buffingette, manufactured by the Keratol Company, cor. Clifford and Van Buren sts., Newark, N. J., at 35 cents per yard. A waterproof cloth made in imitation of leather. It is excellent for the sides of books which receive much wear, as it does not show either finger or water marks, and outlasts the ordinary book cloth. It cannot be recommended for full binding as it is difficult to letter and wears away quickly at the joints. At first it has a disagreeable odor, but this wears off. An objectionable feature is that labels cannot easily be pasted upon it until its surface has been scratched. In this process the application of alcohol aids considerably, as it eats the outer surface enough for paper and paste or glue to adhere to it. The objectionable point mentioned is overbalanced by its good qualities.

**Linen.** See English linen.

**Linen-finish buckram.** Polished buckram and satin-finish book cloth. Manufactured by Jos. Bancroft & Sons Co., Rockford, near Wilmington, Del. (New York agent, Albert D Smith, 35–37 Thomas st., New York.) The special features of these cloths, in which it is claimed they are superior, are uniformity of color, finish and fabric, wearing qualities, tensile strength, and easy application of decoration, ink or metal. The Newark library has used the russet red linen-finish cloth for a short time. (15 cents per yard.) It has worn well.

**Meer's Artificial Leather.** A material similar to Keratol, sold by the Manufacturers' Commission Co., 69 Wall st., New York. It costs 25 cents per square yard,a little less than Keratol. In the short trial the Newark library has given it, it has been quite satisfactory. It is waterproof.

**Morocco cloth.** See Imperial morocco cloth.

**Vellum.** See Art vellum.

NOTE.—The prices given in the above list, and elsewhere in the book, are of course subject to change.

CHAPTER XII

## Technical Terms used in Bookbinding

Taken, with omissions, modifications and additions, from the Art of bookbinding, by Jos. W. Zaehnsdorf, Manual of the art of bookbinding, by Jas. B. Nicholson. Bookbinding, by Douglas Cockerell, and other sources.

**Aldine.** See Styles of ornament.

**All-along.** When a volume is so sewed that the thread passes from kettlestitch to kettlestitch, or from end to end in each sheet, it is said to be sewed all-along.

**Antique.** See Blind-tooled.

**Back, tight and loose.** Binding is said to be tight back when the leather, cloth or other material of the book is pasted or glued to the back of the book. This style of binding is commonly used in fine work. Most books, often quite large ones, were formerly bound in this way.

Loose Back. Binding is said to be loose back when the leather, cloth or other material of the back is fastened to the book only along the joints. To the question, which is the better binding for library books, no definite answer can be given.

**Backing.** Bending over the folds at the back of a book to form a ridge or projection called a joint.

**Backing boards.** Used for backing or forming the joint. They are made of very hard wood or faced with iron, and are thicker on the edge intended to form the groove than upon the edge that goes toward the fore-edge of the book, so that when placed one each side of the book and all are placed in the press, the whole power of the laying press is directed toward the back.

**Backing hammer.** The hammer used for backing and rounding. It has a broad, flat face similar to that of a shoemaker's hammer.

**Backing machine.** A machine for backing books. If not carefully handled it is apt to injure books by crushing and breaking the paper at the folds. Used on publishers' binding.

**Bands.** The strings, cord or twine on which a book is sewn. They are usually made of hemp, are loosely twisted, are 2, 3, 4-ply according to the size of the book, and cost about 35 cents per pound. This twine is loosely twisted that it may be flexible and less likely to break when glued and dried, and that it may be easily frayed out at the ends for pasting down onto the inside of the covers.

When the book is sewn flexible the bands appear upon the back. When the back is so sewn as to let in the twine, the appearance of raised bands is produced, if at all, by gluing narrow strips of leather across the back before the volume is covered.

**Beating hammer.** The heavy, short-handled hammer used in beating, weighing generally about 10 lbs. Books are beaten to make the leaves lie close to one another.

**Beating stone.** The bed of stone or iron on which books are beaten.

**Beveled boards.** Very heavy boards for the sides of books chamfered around the edges; generally used only on large books in imitation of antique work.

**Bleed.** When a book on being trimmed is so cut that some of the print is taken off it is said to bleed.

**Blind-tooled.** When tools are impressed upon the leather, without gilt, they are said to be blind or blank, and the book is blind-tooled. This tooling is sometimes called antique.

**Blocking press.** Another and more general term for the stamping or arming press; one of the chief implements used in cloth work. Used for finishing in decorating the sides and back of a cover by a mechanical process.

**Board papers.** Those parts of the end papers which are pasted onto the boards.

**Boards** are of several kinds, such as pressing, backing, cutting, burnishing, gilding, etc. The pasteboards used for side covers are termed boards. The boards used for cutting books "out of boards" are called steamboat boards. Tinned boards are used for finished work, while brass or iron-bound boards are used for pressing cloth work. See also In boards.

**Book cloths.** See separate list of these.

**Burnishers** are pieces of agate or bloodstone affixed to handles. With them a gloss is produced on the edges of a book.

**Case work.** When the cover is made and stamped independently of the book, the book being fastened into it. Refers principally to cloth bindings. Almost all books are now published "cased."

**Collating.** Examining the signatures, or sheets, after a volume is gathered, to ascertain if they be correct and follow in numerical order. Also, examining a book page by page to see if it is complete.

**Cropped.** When a book has been cut down too much it is said to be cropped.

**Cutter, or Cutting machine.** The machine on which the edges of the leaves of books are cut or trimmed. Running such a machine is now a special branch of the binder's trade.

**Decoration.** See Styles of ornament.

**Dentelle border.** A tooled pointed border with finely dotted or Gascon ornaments in imitation of lace. See also Styles of ornament.

**Derome.** See Styles of ornament.

**Diaper.** A term applied to a small repeating all-over pattern. From woven material decorated in this way.

**Doublure.** The inside face of the boards, especially applied to them when lined with leather and

decorated. When thus lined a cover is said to be "double."

**Dutch metal.** An imitation of gold leaf, sometimes used on cheap bindings. It soon grows dark

**End papers.** The papers placed at each end of the volume and pasted down upon the boards. Also, the paper placed at each end of the volume, a portion of which is usually removed when the lining paper is pasted down upon the boards. Also called waste papers.

**Eve.** See Styles of ornament.

**Extra binding.** A trade term for the best work.

**Fillet.** A cylindrical tool upon which a line, lines, or figures are engraved. Used in finishing.

**Finishing.** The department which receives books after they are put in leather, and ornaments them as required. Also, the ornaments placed on a book. One who works at this branch is termed a finisher. It includes lettering, tooling, polishing, etc.

**Finishing press.** A small press with which a book is held firmly with its back upward and exposed for work.

**Flexible.** When a book is sewn on raised bands or cords and the thread is passed entirely round each band.

**Fly leaves.** Blank leaves at front and back of book.

**Folder.** A flat piece of bone or ivory used in folding the sheets and in many other manipulations. Also applied to the person engaged in folding sheets.

**Fore-edge.** The front edge of the leaves.

**Forwarding.** All processes through which a book passes after sewing, other than those of ornamentation by means of tools or rolls. Also that department which takes books after they are sewed and advances them until they are put in leather ready for the finisher. One who works at this branch is termed a forwarder.

**French joint.** A joint in which the board is not brought close up to the back, thus giving more play in opening.

**Full-bound.** When the sides and back of a book are entirely covered with one piece of the same material it is said to be full-bound.

**Gascon, Le.** See Styles of ornament.

**Gathering.** The process of collecting the several sheets which make a book and arranging them according to the signatures.

**Goffered edges.** When impressions are made with the finisher's tools on the edges of the book after gilding, they are said to be goffered.

**Glair.** The whites of eggs beaten up and used in finishing and gilding the edges of the leaves.

**Gold cushion.** A cushion of leather on which the finisher cuts gold leaf into pieces.

**Gold knife.** The knife for cutting the gold; long and quite straight.

**Graining.** The process of giving to leather surfaces of different kinds.

**Grains.** See this entry in the List of leathers.

**Grolier.** See Styles of ornament.

**Groove.** That part of the sections which is turned over in backing to receive the board. Also called the Joint.

**Guards.** Strips of paper inserted in the backs of books to which plates or pictures or any extra leaves are to be attached. These strips must always be cut with the grain. They make the back as thick as the book will be when the plates have been attached to them. Also, the strips upon which plates are mounted. Also, the strips of paper or cloth pasted along the fold of two leaves to strengthen it.

**Guillotine.** A machine with a heavy knife having a perpendicular action, used for cutting paper. Usually called a Cutter, or Cutting machine.

**Half-bound.** When the back of a book is covered with leather and the sides with paper or cloth.

**Hand letters.** Letters fixed in handles; used singly for lettering.

**Head and tail.** The top and bottom of the back of a book.

**Headband.** The silk or cotton ornament worked at the head and tail of a book, to give it a finished look, to strengthen it and to make the back even with the squares or boards which form its sides.

**Head cap.** The fold of leather over the headband.

**In boards.** When a book is cut after the boards

are affixed to form the sides, it is said to be cut in boards. The term is also applied to a style of binding in which the boards are covered with paper only.

**Italian.** See Styles of ornament, Aldine.

**Jansen.** See Styles of ornament.

**Joints.** The projections formed in backing to admit the boards. Also the leather or cloth, with its lining, where it passes from the book proper to the boards when the volume is covered; that is, the part of the binding that bends when the boards are opened. See also, French joint.

**Kettlestitch.** As the sewer draws the thread out through the hole near the end of a signature she passes it between the two preceding signatures and around the thread which connects them, before she passes it into the hole in the signature she next lays on. This is called the kettlestitch, a word said to be a corruption of either catch-up stitch or chain stitch.

**Keys.** Little metal instruments used to secure the bands to the sewing bench.

**Laced in.** When the boards are affixed to the volume by passing the bands, strings, or tapes on which it is sewn through holes made in the boards, they are said to be laced in.

**Leathers.** See separate list of these.

**Lining paper.** The colored or marbled paper at each end of a book. Called also End papers, which see.

**Loose back.** See Back, tight and loose.

**Maioli.** See Styles of ornament.

**Mill-board.** The boards that are attached to the book to form the covers. Several kinds are in use now; the best is made of old naval cordage.

**Mosaic.** See Styles of ornament.

**Off-set.** The impression made by print against the opposite page, when a book has been rolled or beaten before the ink is dried; also called Set-off.

**Ornament.** See Styles of ornament.

**Out of boards.** When a volume is cut before the boards are affixed it is done "out of boards." Nearly all work is now done out of boards.

**Overcasting.** Sewing the leaves or signatures of a book together over and over. Usually done only when the book consists of single leaves or plates; but is quite commonly employed now in rebinding books, especially on the last two or three signatures front and back.

**Pallet.** Name given to the tools used in gilding upon the bands; sometimes applied to the steel box, with a handle, in which letters are fastened when they are pressed upon the back.

**Panel.** The space between bands; also applied to beveled and sunk sides.

**Paring.** Reducing the edges of the leather by cutting them down to form a gradual slope. In large binderies now done by a machine.

**Paring knife.** The knife used for paring.

**Pastewash.** A thin dilution of paste in water.

**Payne, Roger.** See Styles of ornament.

**Petits Fers.** Small hand tools used in finishing, as distinguished from the stamps or blocks worked in a press.

**Pointille.** The dotted style of ornament of Le Gascon.

**Polisher.** A steel instrument for giving a gloss to the leather after finishing.

**Press.** There are several kinds of presses, viz.: hand press, plough and press, for cutting, and standing, stamping, embossing, gilding, and finishing presses.

**Pressing boards.** Boards put between books when they are pressed. They are usually made of carefully seasoned wood, and have a heavy strip of brass about their edges, which projects a little above the board's surface. Books are laid on the boards with their backs projecting over this band enough to bring the latter exactly into the groove of the joint. Another board is laid on these books in the same position as the first, and so on. All are then pressed.

**Rolling machine.** A machine introduced to save the labor of beating. By it the sheets are passed between two revolving cylinders. Used in publishers' binding.

**Rolls.** Wheels of brass, cut to any pattern, for impressing gold leaf on leather.

**Saddle stitching.** Binding a pamphlet which consists of one signature only by sewing it through

and through its one fold. Usually done with wire on a machine.

**Sawing in.** Making grooves in the back of a book with a saw to receive strings or bands.

**Section.** A folded sheet. See Signature.

**Semis.** A diaper design, made up of the repetition of one or more small tools.

**Setting the head.** Covering the headband neatly with the leather, so as to form over it a kind of cap.

**Sewer.** The person who sews together on a sewing bench the sheets, called when folded sections or signatures, to form a book.

**Sewing bench.** A board from one side of which rise two sticks, across which is a bar, which can be moved up and down and fixed in any desired position. Strings, bands, or tapes are stretched vertically between the edge of the board and the cross bar; against these the signatures of a book are successively placed and to them sewn.

**Signature.** The letter or figure under the footline of the first page of each sheet to indicate the order of its arrangement in the book; often applied to the sheet itself.

**Size.** A preparation of pastewash used in finishing and gilding.

**Slips.** The ends of the band, twine or tape on which the book is sewn that project beyond the back after it is sewn.

**Squares.** The portion of the boards that project beyond the edge of the leaves of the book.

**Stabbing.** The operation of piercing the boards with a bodkin for the slips to pass through. Also the piercing of pamphlets for stitching. Also the process of fastening pamphlets together with staples of fine wire, done on a machine.

**Styles of ornament.** See list which follows this one.

**Super.** A thin, loosely woven cotton cloth, glued onto the backs of books to help to hold the signatures together and, by extending over to the inside of the cover, to hold book and cover together. In publishers' binding this is usually all that holds a book in its case. It is thin and loosely woven that it may be easily glued down and starched that it may be easily handled.

**Tape.** Cotton tape on which many books are best sewn. It should be stout but flexible.

**Thread.** The thread with which books are sewn is usually made of linen, unbleached. It comes in several sizes. If of good quality, say Hayes's Standard linen, it costs about $1.25 per pound for No. 18 2-cord.

Silk thread is sometimes used in extra binding and on very thick books.

**Three-quarters bound.** When the back and corners of a book are covered with leather, and the sides with paper or cloth.

**Tight back.** See Back, tight and loose.

**Tools.** Brass stamps used for impressing gold

leaf on leather. Applied particularly to the hand stamps and tools used in finishing.

**Uncut.** A book is said to be uncut when the edges of the paper have not been cut with the cutting machine.

**Unopened.** A book is said to be unopened if the bolts of the sheets have not been cut.

**Waste papers.** See End papers.

**Whipstitching.** Same as Overcasting.

**Whole binding.** When the leather covers the back and sides of a volume.

CHAPTER XIII

## Styles of Ornament

(From a Grolier club catalog)

**Aldine or Italian.** Ornaments of solid face without any shading whatever, such as used by Aldus and other early Italian printers. The ornaments are of Arabic character. A style appropriate for early printed literature.

**Derome.** This style has ornaments of a leafy character, with a more solid face, though lightly shaded by the graver. The ornaments are often styled Renaissance, being an entire change from the Gascon. The Derome is best exemplified in borders, Vandyke in design; it is simple in construction but rich in effect, and is appropriate for art publications. Time, eighteenth century.

**Eve.** A framework of various geometrical-shaped compartments linked together by interlaced circles; the centers of the compartments are filled with small floral ornaments and the irregular spaces surrounding them with circular scrolls and branches of laurel and palm. An elaborate style of the end of the sixteenth and beginning of the seventeenth century.

**Gascon, Le.** The distinguishing feature of this style is the dotted face of the ornaments instead of

the continuous or solid line. Wherever these dotted ornaments are used the style is called Le Gascon. Time of the first half of the seventeenth century, immediately following that of Nicholas and Clovis Eve.

**Grolier.** An interlaced framework of geometrical figures—circles, squares, and diamonds—with scroll work running through it, the ornaments of which are of moresque character, generally azured in whole or in part, sometimes in outline only Parts of the design are often studded with gold dots. Time first half of the sixteenth century.

**Jansen.** Without line or ornament either in blank or gold. It permits decoration on the inside cover, but demands absolute plainness on the outside, with the exception of lettering. It is only appropriate for crushed levant, it being dependent for its beauty on the polished surface of the leather.

**Maioli.** A style prior to and contemporary with the early (Italian) examples of the Grolier. Generally composed of a framework of shields or medallions, with a design of scroll work flowing through it. Portions of the design are usually studded with gold dots. Ornaments are of moresque character.

**Mosaic.** A design inlaid with different colors. The cover may be of any shade, but the style is especially beautiful when the cover is of white vellum in imitation of illuminated manuscripts. Suitable for ancient manuscripts and the higher grade books printed in colors.

**Payne, Roger.** The ornaments of this style are easily identified, being free and flowing in stem and flower; whereas before Payne's time they had been stiff and formal. The honeysuckle is a customary ornament. The impressions of the tools are usually studded round with gold dots, whether used in borders, corners, or centerpieces. The style is well suited for early nineteenth century literature, especially poetry.

CHAPTER XIV

## Repairing Books

The universal rule in this matter is, don't. To this there are exceptions; but many, if not most, of the books which are repaired are so injured by the process itself, or by the wear they receive after they are repaired, that it would have been better for them if they had not been repaired at all, but sent direct to the binder.

Librarians do not pay sufficient attention to book medicine and book surgery.

All repairing of books should be done by skilled persons. The question of whether or not repairs shall be made at all should be decided by a person who has not only technical skill in repairing; but also knowledge of the use to which the book in hand is likely to be subjected. This, because in many cases it will be evident to a person who knows about the use books are to have that certain of them should not be repaired at all, no matter if in quite a dilapidated condition, with loose covers and loose leaves; but should be neatly wrapped in good manila paper, labeled plainly on the back and set again on the shelf. The few times in a year when little-used books are wanted do not, in many cases, warrant their re-

binding. Repairs on them, no matter how well done, are likely to injure them. Books which are rarely borrowed, even though they are used occasionally, or are even a good deal handled because they stand near books which are much used, should perhaps be mended a little; loose leaves should be tipped in, at least. But work on them beyond that is often injurious.

The feeling that all books in a library should be neatly bound has caused much unnecessary expense.

In a library of moderate size, and, of course, in a large one, there should be a supervisor of binding and repairs; a person thoroughly familiar with the whole routine of library work, familiar also with literature, keeping close watch of the rise and fall in popularity of new books Such a person could say, for example, that the library's third copy of the Valley of decision and the fourth copy of the Crisis, if ready for repairing or rebinding, could with good economy be placed on a reserve shelf, not accessible to the public, there to be held until the delivery desk assistants find a call for them. That is, she would know that with two or three copies in good condition of these books in circulation there would almost always be one in the library. When the library's stock of such books as those named becomes reduced to one sound copy she can then tell, from the demand for it, if it is wise to bind one copy, or all; or if it is wise to do more than mend.

This omniscient person who has charge of binding and repairs, reports to the head of the library

that such and such books are past repairs; that they will cost 35 to 50 cents apiece to be properly rebound, and will the library ever want them again? If not, then she will say, give them away and remove the cards from the catalog. Or, if they must be kept for historical or religious or superstitious or other reasons, then let them be neatly tied up in paper, labeled, and put back on the shelf.

Technical skill in mending implies not only knowledge of the process of making a book by machinery and by hand; but also knowledge of the different kinds of paper, how they wear, if they break easily, if they will soon grow brittle, and the effect on them of attempts to hold them with paste or glue.

Along with this knowledge should also go knowledge of the cost of each individual book, and such knowledge of their use as will enable the repairer to decide at once whether 10, 20 or 30 cents spent in repairs will or will not pay.

As long as there are so few assistants who are at all familiar with paper, type, binding, literary quality, popularity, cost, etc., it is well to discourage almost all book repairs.

As soon as we admit, as we must, that a good book, costing from one to two dollars, must be mended carefully if at all, we have opened the door for a large expense. An assistant can easily spend an hour or two on a book, repairing its cover, mending a few leaves and putting it in order. When she gets through she will have put from 30 to 50 cents' worth of time into it, has probably permanently in-

jured it, and in a few months or years it will be in worse condition than if she had never touched it at all. Moreover, the same amount of money put out in cash instead of time would in many cases have rebound it.

In a measure the remarks just made apply even to popular books, much used by children or adults. It is easy to spend more money in mending them than good economy can justify. Mend sparingly; rebind early.

The reason for this warning against mending lies in the anatomy of the book and the injury it receives from handling after it begins to break up, and especially after its first breaks have been mended by a prentice hand.

The weakest point in a book is the joint. In publishers' binding of today this joint is made by a piece of super, which is glued to the back of the book and then to the inside of the cover, plus the end paper which is pasted over it and also onto the cover. This super is weak. If put on with a poor glue which grows hard it is further weakened thereby. It breaks or tears easily. It parts easily from the back to which it is glued and also from the cover. No strings or tapes pass from the book to cover. When the joint once comes loose from either back or cover, or breaks, it cannot well be either attached or mended again. It is sometimes possible to take a broken book out of its case entirely, remove the old and attach new super, add new end sheets, put it again into the case and get considerable use from it. But

any other kind of mending of the joint is almost futile and even this is injurious. And the better such mending seems at first to succeed, the greater the harm it is really doing to the whole book. For the mending usually consists in pasting a strip of strong paper or cloth along the joint. This simply conveys the strain from the joint proper, where it belongs, to the first leaf of the first signature. This is only paper, usually poor at that. It soon breaks and lets its other half loose. Very commonly other injuries are worked at the same time. The book gets loose again, if it was ever really tightened. The super with hard glue attached rubs about on the backs of the signatures; several of them are cut through, and the possibility of a rebinding with proper sewing is either gone forever or can be regained only after the long labor of mending many signatures.

When the cords or bands are broken in a book in which they are used it is as useless to attempt to fasten book and cover together as it is when the super gives way in publishers' binding.

Loose leaves appear earliest in books printed on paper which is so heavy that it breaks almost as soon as it is folded. If the leaves of such books are tipped in they tend to tear out with them the ones they are tipped onto. Leaves should rarely be tipped into books which have never been rebound. In rebound books which are in their last days and will never be rebound again it is sometimes proper to tip in.

Full-page illustrations which come loose can in most cases be left out to advantage. To tip them

in again hurts the leaves they are fastened to. They are usually so poor that it is a kindness to the reader to throw them away.

The mending of leaves is easily done with a gummed transparent paper.

In the long run a book needing more than very slight repairs will give better returns if so rebound at once that it will hang together until so dirty that it will have to be thrown away.

Some books, especially some of those printed on cheap, heavy, coated paper, will never pay to rebind. They should be mended, each according to its constitution, and when beyond mending thrown away.

Good general rules for mending books are few. The first and most important of all is: Be sparing with paste or other stickist. Another is: If a machine-bound book is broken at the joint, the cover beginning to part from the back, send it straight to the binder.

The best plan is to buy your books as far as possible properly bound for library use direct from the publishers' sheets. Such books never need mending or rebinding. Being flexible and easily opened their leaves are rarely torn; and, for the same reason, getting no hard pressure from moist or dirty hands in trying to keep them open, their leaves keep clean for a long time.

Books not thus bound in the first place should be rebound in first-class manner when they begin to break. Parsimony in rebinding is a library thief.

CHAPTER XV

## Repairing Books: Materials and Tools

In spite of the remarks in foregoing paragraphs about the injury often done to books by repairing them, even when the repairs are cleverly made, it is well for any library, however small, to have a mending table at which such work on books as seems necessary can be done. The materials for this work can in part be obtained from a bindery. There one can get super, pieces of book cloth of several colors, and some of other things mentioned below and in the list of technical terms. One needs for book repairs some or all of the following things, according to the amount of work to be done.

**Sewing bench.** This can be made as follows: Take a board 24 in. long and 10 in. wide. On the side of it and 14 in. apart nail two uprights, ¾ in. square and a foot long. Across the top of these nail a stick ¾ in. square. Tacks can be driven into the board and into the cross stick above where needed, and cords or tapes stretched between them; and you then have all the essentials of a sewing bench, on which a book can be sewed as well as on a regular bench.

**Paste.** Buy this at a bindery, if you use much.

For occasional use it can be made, as already stated: stir flour in cold water until smooth, add hot water, let it boil for a few minutes, and add a little salt and alum as preservatives. Good paste can be bought in jars. Higgins' is the best. The cost is 25 cents per 8-ounce jar. Almost any stationer carries it, or it can be ordered of Charles M. Higgins, 168 Eighth st., Brooklyn. A convenient thing for paste in small quantities is the tube. The several makes are about equally good.

**Brushes.** Buy a small brush, about as large as a lead pencil, and another half an inch in diameter. Their prices vary with their quality, from 10 cents up. These will be sufficient for most purposes. Get good ones; and for paste and glue the kind set in cement not in glue. Chinese bristle brushes are good.

**Cloth.** A yard or two of super. This is stiffened a little and pastes and handles more easily than cloth. If you are going to put backs on books you will need also pieces of bookbinder's cloth. These can be bought at almost any bindery in yard lengths. Get also pieces of cambric and fine muslin called nainsook, or jaconet, for guarding signatures and similar work. It costs 15 cents a yard.

**Paper.** Different kinds of book paper, to be obtained from any printer, will be needed for replacing end sheets, also thin bond paper for guarding leaves. Rope manila of the best quality will also be found useful. Get also some of the rolls of adhesive

paper sold by The Dennison Manufacturing Company, 11 Dey st., New York (¾ inches wide, per dozen spools 40 cents), for mending torn pages. Nothng is more convenient.

**Gummed paper.** Paper and cloth ready gummed and other useful repair material can be bought of Gaylord Bros., Emerson building, Syracuse, N. Y.

**Needles.** Several sizes, especially the regular sewing needles of the binder.

**Thread.** Some of Hayes's best Irish linen thread, smaller size, say No. 18. Or Barbour's linen, No. 30.

**Knife.** A good knife is what is called a shoemaker's knife, a long blade, square at the end. 15 cents. Keep the corner square by occasionally knocking a piece off the end. For a sharpener wrap a piece of fine emery paper about a square stick and tack it down.

**Cutting board.** The best cutting board is one of hard wood. A common bread-board will serve for small work and costs only a few cents.

**Ruler.** One with a brass edge is handy, but not essential.

**Scissors.** Slender, 6-inch blades, good quality. 75 cents.

**Folder.** Flat piece of bone. 15 cents.

**Glue pot.** Get the regular double pot of iron. A No. 2 will cost about 75 cents.

**Ground glue.** Best, 18 cents a pound.

**Copying press.** For pressing books. One 10x12 inches will cost about $3.75.

CHAPTER XVI

## Binding Records

By binding records are meant the reports of books sent to the bindery, their return, styles, cost, etc. There are many ways of keeping these. For the small library great simplicity is desirable, and possible. The large library usually works out a method adapted to its own conditions.

In sending books to a binder it is usually not necessary to keep any record other than the book card, on which may be written or stamped the word Binder and the date sent. To this may be added a few words or a number indicating material and style. The binder himself is usually content with general instructions for each separate lot, such as, "These 25 vols. bind in half brown cow-skin with keratol sides; special sewing." Some libraries attach a note to the title-page of each book saying how it is to be bound and giving the lettering for the back. This is not often necessary. It is usual to note the latter point on the title-page by underscoring the first letter of each word which is to appear on the back. In doing this reduce the lettering as far as possible by omitting unnecessary words. In most libraries, for example, the new title for "The adventures of Huckleberry

Finn" can be reduced to advantage to "Huck Finn."

Special books must be specially marked of course, and books in sets and series should be lettered in the same style throughout. This can be assured by sending a sample volume or a rubbing of the back. The rubbing is got by laying a piece of paper on the back of the volume the style of which is to be copied and rubbing it hard with a large, soft pencil or rub-off wax.

As books are returned they should be checked by whatever record was kept of them. Then their number, sizes and styles should be entered in a book kept for the purpose. From these items the bill will be checked when sent in.

## Makers and Dealers in Bookbinders' Materials and Machinery

Jos. Bancroft & Sons, Manufacturers, Rockford, Wilmington, Del. Book cloths. Albert D. Smith, 35 and 37 Thomas st., New York, New York agent.

John Campbell & Co., 164 William st., New York. Leathers, book cloths, marble papers, etc.

Cedric Chivers, 1242 Fulton st., Brooklyn, N. Y., and Portway, Bath, England. Binder from publishers' sheets, rebinder, art binder. Has special binding material.

Crawley Book Machinery Company, Newport, Ky. Bookbinders' machinery.

Louis De Jonge & Co., 67-73 Duane st., New York. Leather, book cloths, fancy paper, bookbinders' supplies and machinery.

Gane Bros., 81 Duane st., New York. Leathers, cloths, boards, bookbinders' supplies and machinery of every description.

Thos. Garner & Co., 181 William st. and 22 Spruce st., New York. Manufacturers of leathers and bookbinders' supplies.

Gaylord Bros., 117 Emerson building, Syracuse, N. Y. Book-repair material of many kinds.

The H. Griffin & Sons Company, 75-77 Duane st., New York. Leathers, book cloths, marble papers and bookbinders' materials of every description.

The Hamilton Manufacturing Company, main office and factory, Two Rivers, Wis. Eastern office and warehouse, Middletown, N. Y. Bookbinders' furniture and supplies.

C. B. Hewitt & Brothers, 48 Beekman st., New York. Paper, boards and glue.

Holliston Mills, 67 Fifth av., New York. Book cloths.

Hoole Machine and Engraving Works, 29 Prospect st., Brooklyn, N. Y. Manufacturers of bookbinders' tools and machinery.

Interlaken Mills, 111 Duane st., New York. Book cloths.

Keratol Company, cor. South and Van Buren sts., Newark, N. J. Manufacturers of imitation leathers.

Latham Machinery Company, 195-201 S. Canal st., Chicago, Ill. Manufacturers of bookbinders' and printers' machinery.

Leclercq & Co., 22-26 Elm st., New York. All grades of bookbinders' papers.

Lindenmeyr & Sons, 20 Beekman st., New York. Paper.

Manufacturers' Commission Co., 69 Wall st., N. Y. Meer's artificial leather.

J. W. O'Bannon Company, 74 Duane st., New York. Dealers in all bookbinders' supplies.

Premier Machine Works, 164 William st., New York. Bookbinders' material.

C. & W. Pyle Company, 4th and Van Buren sts., Wilmington, Del. Bookbinders' material.

Schulte & Co., 51 N. 7th st., Philadelphia, Pa. Leather and book cloths.

T. W. & C. B. Sheridan, 58 Duane st., New York. Bookbinders' machinery.

J. L. Shoemaker & Co., 15th and S. 6th sts., Philadelphia, Pa. Machinery, paper, leather, etc.

Stark & Selig, 458 W. Broadway, New York. Book stamps and embossing dies.

F. Wesel Manufacturing Company, 82 Fulton st., New York. Bookbinders' machinery.

## A few of the Best Books on Bookbinding, Paper and Leather

Paul Adam. Practical bookbinding $1.25. Van Nostrand. New York. 1903. This is a translation from the German, the author being the director of the Düsseldorf Technical School of Artistic and Practical Bookbinding. It treats mainly of the practical side of binding and describes with considerable detail the materials used in the work. It is illustrated mostly with outline cuts which aid the reader or student to understand the several methods and processes.

W. S. Brassington. History of the art of bookbinding. $10.00. Stock. London. 1894. Interesting illustrations of ancient records before book making. Notices of printers, collectors, binders and famous books. Appendix C gives samples and brief descriptions of oriental forms of binding. Very good general work.

J. W. Butler. The story of paper making. $1.25. Butler Paper Co. Chicago. 1901. An interesting account of paper making from its earliest known record down to the present time.

Cedric Chivers. Improvements in the binding of books. Free. Cedric Chivers. Bath, England. Description of the methods used by Chivers in his own bindery. The writer has a high reputation, and probably binds books more satisfactorily for libraries than any binder in the world today.

Douglas Cockerell. Bookbinding and the care of books. $1.25 net. Appleton. New York. 1902. Text-book of workshop practice from personal experience and critical examination of methods current in shops. It supplements workshop training and is a help in the selection of sound bindings. The best single book for the librarian.

Douglas Cockerell. A note on bookbinding . . . with extracts from the special report of the Society of Arts on leather for bookbinding. London. Issued by W. H. Smith & Son, for their bookbinding department. 1904. Price 1 penny.

Gane Brothers. Bookbinders' stock. Free. Gane. 81 Duane st., New York. A trade catalog, giving cuts of articles as well as prices.

A. Growoll. The profession of bookselling. 2v. $4.00 net. Publisher's Weekly. New York. 1895. Contains an excellent article on bookbinding with descriptions of leather and other cover material, cost and other details. A list of authorities is given and a description of technical terms. Brief, but there is nothing better, except Cockerell.

Hulme, Parker and others. Leather for libraries. Published for the Sound leather committee of the Library association, England, by the Library Supply Company. London. 1905. Price 40 cents. A summary of the report of the committee of the Society of Arts, brought down to date, and with helpful notes added. Includes small samples of leather.

Journal of the Society of Arts. 4 nos. 20 cents each. London. Sept. 11, 18, 25, Oct. 2, 1903. Four lectures delivered by Julius Hübner, director of the paper making department, at the Municipal School of Technology, Manchester, Eng., giving a practical treatise on paper making. Also issued as "Canton Lectures" in one pamphlet, same society. 25 cents.

Journal of the Society of Arts. 20 cents. London. July 5, 1901. Report of a committee on leather for bookbinding. The decay of leather, a subject which has attracted a great deal of attention and interest among librarians and collectors. The best thing for librarians ever published on leather.

Report of the committee on leather for bookbinding. (A reissue of the above.) Edited by Cobham and Wood for the Society of Arts. $2.80. London. Bell. 1905. Contains some material on dyeing of leather not in the original report, has numerous illustrations, 12 samples of leather, well printed, bound in cloth.

S. T. Prideaux. An historical sketch of bookbinding. $1.50

net. Lawrence. London. 1893. Intended as a help in the first steps. A chronological table of French and English sovereigns is added with a bibliography and explanation of technical terms. An appendix treats of ornamentation.

Society of Arts—Committee on the deterioration of paper. Report . . . with two appendixes: 1, abstracts of paper on German official tests, 1885–96; 2, correspondence. London. 1898. 25 cents.

J. W. Zaehnsdorf. The art of bookbinding. $1.25. Bell. London. 1880. Step by step an imaginary book is bound, as in an "extra shop," to show the amateur how to bind his own book or how to know a good binding when purchasing. Illustrations of machinery used are given and practical receipts.

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